ACSON International

Makes Life A Luxury

HydroTech Chilled Water System

All Product Brochure

About Acson International

With products available in more than 55 countries spread across 7 continents around the world, Acson is truly international. Backed by an advanced research and development team, manufacturing facilities as well as highly-trained and extensive service network, Acson International has the key to provide ideal solution for any air-conditioning system.

With more than 25 years of manufacturing experience, Acson International has the proficient skills to continue to strive for quality excellence. Meanwhile, we devote our energy and effort to fulfil world wide customer satisfaction.

Even in light of our past efforts and success, we are as determined as ever to keep bringing our products and services to the whole world. Acson International is indeed “a global force with local presence”.

Central America

• Barbados •

Oceania

• Australia • Fiji • New Caledonia • Papua New Guinea •

Middle East

• Jordan • Kuwait • Lebanon • Oman • Qatar • Saudi Arabia • Syria • UAE • Tunisia •

Europe

• Austria • Czech Republic • Croatia • Denmark • England • Finland • Germany •
• Greece • Hungary • Italy • Kazakhstan • Netherlands • Poland •
• Portugal • Romania • Russia • Spain • Sweden • Turkey •

Asia

• Bangladesh • India • Indonesia • Malaysia • Myanmar • Nepal • Pakistan • Sri Lanka •

PRODUCT

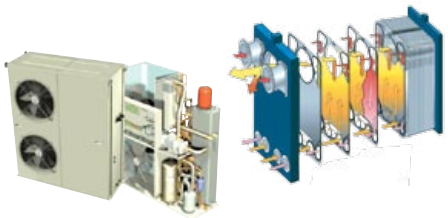
	A(4)MAC-C Series (R-22 & R-407C)	A5MAC-C Series (R-410A)	Tandem Compressor AMAC-C Series (R-410A)	Inverter Mini Chiller (R-410A)	Wall Mounted GW series	Wall Mounted 301W	Ceiling Cassette AW/AWH Series
							
Features	Pg.5 - Pg.9	Pg.5 - Pg.9	Pg.10	Pg.11 - Pg.12	Pg.14	Pg.14	Pg.14
Specification	Pg.S1 - Pg.S4	Pg.S5	Pg.S5	Pg.S5	Pg.S11	Pg.S11	Pg.S6

Capacity (Btu/hr)

6,500
7,000
9,000
10,000
15,000
20,000
25,000
30,000
40,000
50,000
55,000
60,000
75,000
80,000
100,000
120,000
150,000
200,000
210,000
300,000

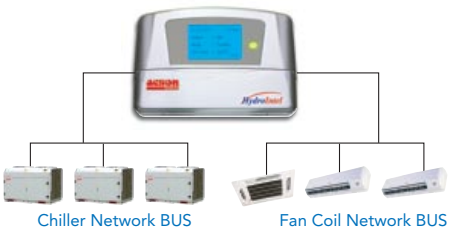
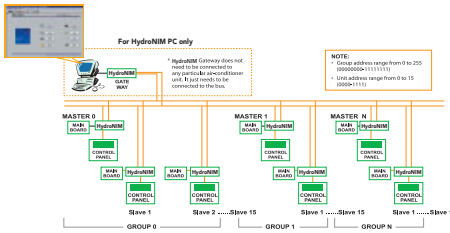

Cooling only Model
Heat Pump Model

OTHERS

Mini Chiller Features	Tandem Mini Chiller	Inverter Mini Chiller
		
Pg.7 - Pg.9	Pg.10	Pg.11 - Pg.12

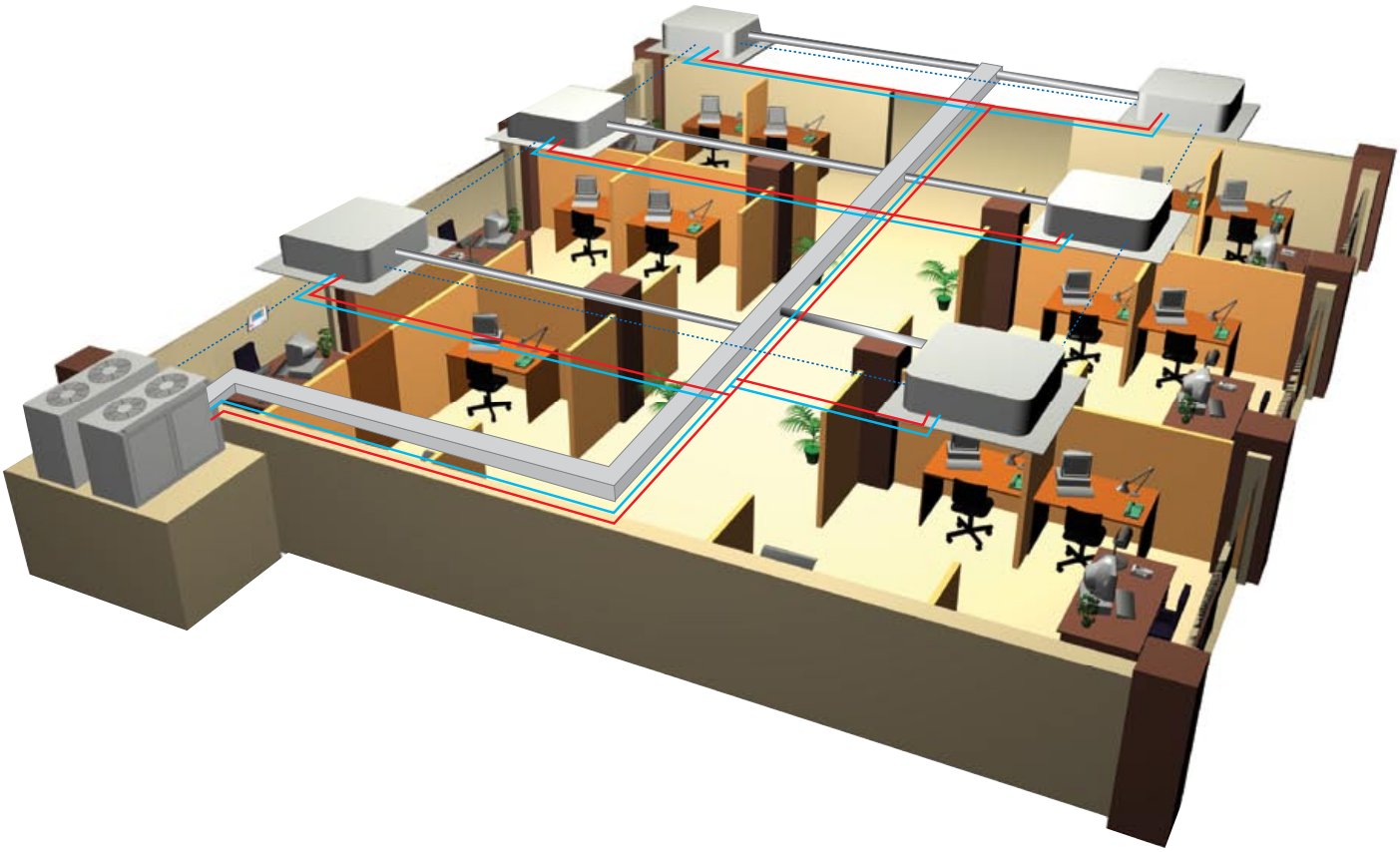
LINE-UP

Ceiling Cassette CW Series	Ceiling Exposed CBW Series	Ceiling Convertible EW Series	Ceiling Convertible DW Series	Ceiling Concealed CW Series	Ceilling Concealed CW-C Series	Ducted Split BW Series
						
Pg.14	Pg.15	Pg.15	Pg.15	Pg.15	Pg.16	Pg.16
Pg.S7	Pg.S8	Pg.S12	Pg.S8	Pg.S9	Pg.S10	Pg.S11

	Hydrointel Controller	HydroNIM	AC8100A and AC8000C
			
	Pg.17 - Pg.20	Pg.21	Pg.22

HydroTech

Chilled Water System



Acson International is committed to offer you with the better solution in your air conditioning needs. In the new HydroTech series of chilled water products, Acson International is not just offering you with wide range of chilled water air conditioning equipments, but a better solution from selecting the equipments, designing the water piping systems to providing easy control of the complete chilled water system. This is facilitated by the user friendly computer selection programs and remote monitoring of the operation of complete system through the smart HydroIntel controller.

The HydroTech series of chilled water product has incorporated the technology of advanced communicating controls, microprocessor controlled chillers with a wide range and variety of fan coil unit that offers total flexibility.

HydroTech chilled water series of products

1. Year Round Comfort

Can be used in variety of climates with systems that are available in two versions, cooling only and heat pump.

2. Reliable And More Efficient

The refrigerant of the system is confined to within the chiller itself and therefore no refrigerant is circulating throughout the building. This will be no risk of refrigerant leakages in building or risk of poor oil return that will damage compressor caused by poor installation.

Multiple compressors in Hydrotech chiller series offers stages capacity control that will offer better efficiency.

3. Long Piping Applications

The HydroTech series avoids the limitation of piping lengths and bends that exist in Direct Expansion refrigerant system. The chiller can be installed far away from the fan coil units, thus offering flexibility and creativity in the installation site.

4. Multiple Temperature Zone Control

The operation of the fan coil units can be managed independently by zones according to similar air conditioning comfort needs.

5. Quality, Innovative and Compact Design

The HydroTech chiller is equipped with reliable and quality components.

HydroTech Air Cooled Mini Chiller Series

Acson International offering you the range of air cooled chiller that is suitable for many applications from residential to commercial.

The HydroTech chiller is incorporated with the basic necessary components such as circulating water pump, expansion tank, compact brazed plate heat exchanger, differential pressure switch and the microprocessor controller and wired control panel.

In addition, the selection of the HydroTech chiller could not be more easy than the user friendly yet versatile HydroPro selection softwares for chiller as well as connecting piping.

In short, HydroTech Chilled Water Product Range offers you the better solution to your chilled water product needs.

Model :
AMAC 20/25/30 C/CR
A4AC 20/25/30 C/CR
A5AC 20/25 CR
A5ACV 30CR

Capacity :
Cooling : 4.9 kW to 8.8 kW
Heating : 6.4 kW to 9.7 kW

Refrigerant : R-22, R-407C, R-410A

Model :
AMAC 40/50/60 C/CR
A4AC 40/50/60 C/CR
A5ACV 55/75 CR

Capacity :
Cooling : 11.1 kW to 15.8 kW
Heating : 12.6 kW to 17.5 kW

Refrigerant : R-22, R-407C, R-410A

Model :
AMAC 80/100/120/150 C/CR
A4AC 80/100/120/150 C/CR
A5ACV 100/135/210 CR

Capacity :
Cooling : 21.6 kW to 58.6 kW
Heating : 26.4 kW to 61.5 kW

Refrigerant : R-22, R-407C, R-410A

Model :
A5AC 30/40/50/55 CR

Tandem Compressors

Capacity :
Cooling : 7.3 kW to 14.9 kW
Heating : 9.8 kW to 18.0 kW

Refrigerant : R-410A

FEATURES

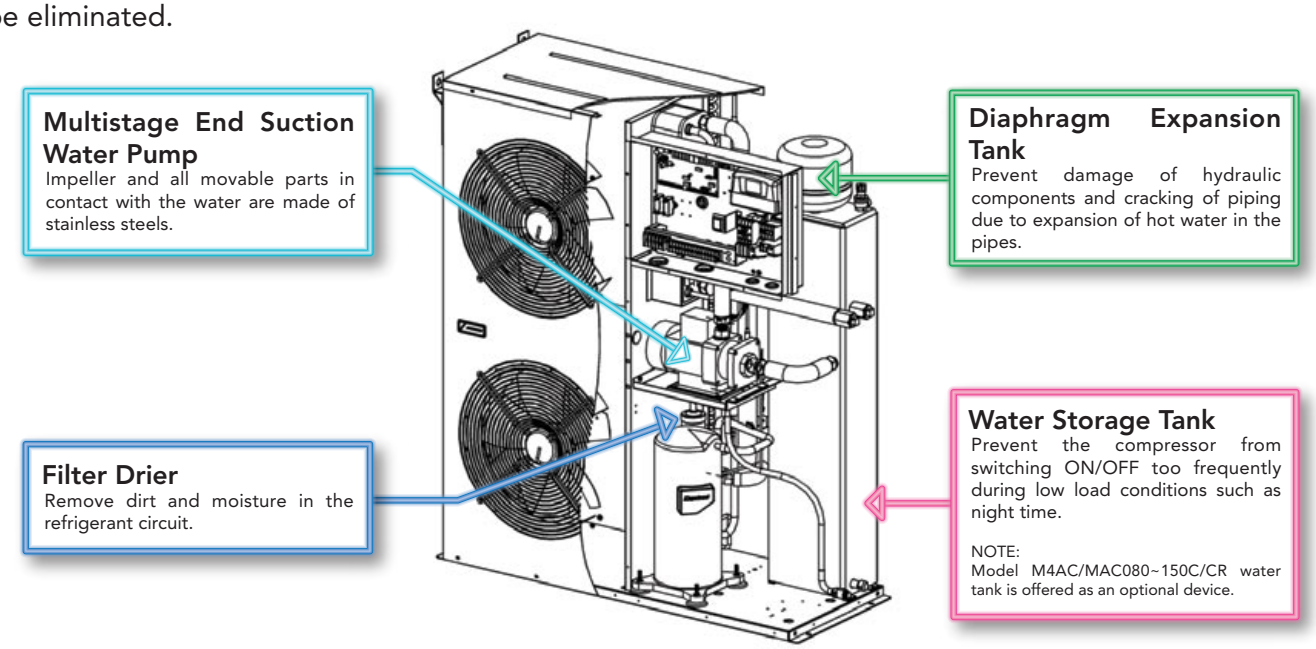
Long Piping Application :

McQuay chilled water system has no limitation in piping lengths unlike Direct Expansion refrigerant system. As long as the water pump head pressure is sufficient to pump the water through the pipe network, the chiller can be installed far away from the fan coil units. McQuay Mini Chiller had been designed to support maximum water operating pressure up to 1000kPA. With such pressure, McQuay Mini Chiller is enough to support most HVAC application. In the case where the Mini Chiller's built in pump head is insufficient to support the overall friction loss, additional pump can be installed to cater for higher pump head requirement.

Easy Installation and Maintenance :

Integrated Hydronic Components

McQuay Mini Chiller is fully integrated and equipped with key hydronic components such as expansion tank, water tank, brazed plate heat exchanger and water circulating pump. As all hydronic components are assembled and tested in the factory, installation of additional component on site can be eliminated.



Factory Precharged Refrigerant

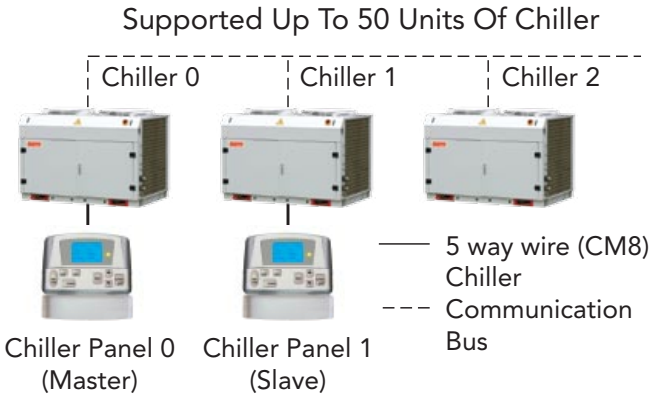
Each heat exchanger in the chiller is brazed and tested against leakages through dried air at 30 bars. After that, another process to vacuum the system before it is accurately charged with refrigerant to ensure optimum performance. Thus, it saves the hustles of field charging by installers.

Serviceability & Error Code For Ease Of Troubleshooting

By opening the front panel, one can access and service all the components in the chiller. The chiller is equipped with self diagnosis function which allow the chiller panel to display total of 19 type of faulty occurred in the system by showing different error code on the LCD screen of the panel.

Modular Installation

McQuay Mini Chiller provides flexibility in adding capacity for building extension. This can be done by installing the mini chiller in modular connection.
A network of up to 50 chillers is possible to be connected in a system. For ease of controlling and setting, McQuay Mini Chiller panel implement Master and Slave function. This function allows user to do the setting at the Master unit only and all the slave unit in the group will follow the same setting.



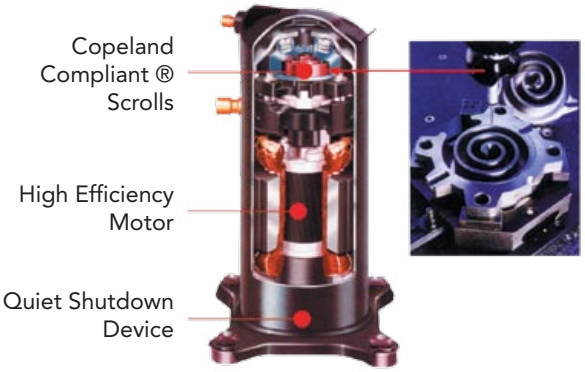
Superior Reliability :

State-Of-The-Art Components

Scroll Compressor

Scroll Compressors are used for the units to offer a quieter and more reliable performance over a wide operating temperature range. (Except MAC/M4AC 020 C/CR which uses rotary compressor).

For MAC/M4AC 030, 040, 050, 060, 080, 100, 120, 150 CR, phase protector is provided to prevent the compressor from rotating in the wrong directions.



Anti-freeze Protection

The chiller unit has several anti-freeze protection features:

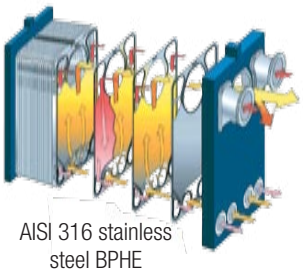
1. Built-in heater in BPHE
   The BPHE has a strip heater around it to prevent water freezing inside.
2. Anti-Freeze sensor
   BPHE can avoid the frosting as the anti-freeze sensor will send the signal to cut out the compressor if the water temperature becomes too cold.
3. Water pressure differential switch
   This protection feature will ensure there is water flow in pipings when the chiller is in operation. Otherwise, the compressor will cut out immediately.

Microprocessor Control

McQuay chillers are equipped with microprocessor controller that will control and regulate the operation of the unit.
Besides, the controller that contains the well developed algorithm will provide protection to the chiller by accurately sensing the key temperatures in both the water and refrigerant circuit. Should there be any abnormal reading received by controller, an alarm signal will be sent to chiller panel, followed by protection action plans such as to stop the operation of compressor, condenser fan motor or circulating water pump.

Brazed Plate Heat Exchanger

The heat exchanger is made of AISI 316 stainless steel plates closely arranged and brazed together to maximize possible heat exchange efficiency.



AISI 316 stainless steel BPHE

Safety Protection

The safety protections provided for the McQuay chiller are:

- High & Low Pressure Switches
- Anti-Freeze Protection Sensor
- Discharge Temperature Sensor
- Over Pressure Relief Valve
- Water Pressure Differential Switch
- Anti-Freeze Heater on BPHE
- Compressor Water Pump & Fan Motor Overload Protector

Efficient And Performance :

Chiller Control Panel

The chiller panel controller is designed to control the chille operation. This device allows the user to have customized control fc each connected unit.

Each chiller will have a chiller control panel that comes as a standar accessory. At the same time, the chiller control panel is able to b installed remotely through the cable up to a distance of 100 meters Example, the chiller panel can be installed in a centralized plar control room for the building.

The chiller control panel has been designed taking into consideration of the user friendly and yet versatile control features.

Anti Corrosion Gold Aluminum Fin

Gold Aluminum fin is offered as the standard material of the condenser heat exchanger of this series of chiller.

Sequencing Control

For MAC/M4AC 080~150 C/CR, both compressors will cut in and cut out depending on their accumulative operating time. This sequencing control feature will ensure no single compressor is overload in operation as well as to ensure longer reliability of compressors.

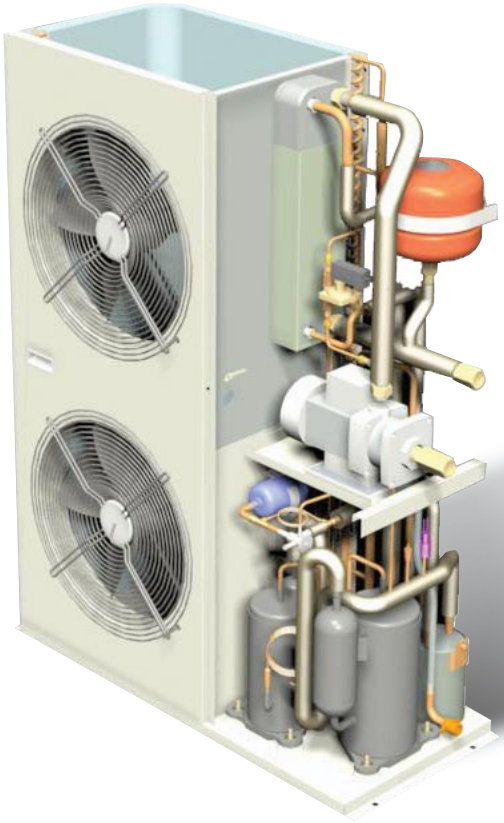
Features:

- Whole system configuration.
- Unique parameter settings.
- Operation status display.
- Tracing fault record (offer quick troubleshooting solutions).
- The display is shown in an 8-lines graphical LCD display. There are 8 dedicated keys available in the panel.
- Menu selection.
- Navigation on the screen.
- Modification of the selected value.

Partial Loading

Models MAC/M4AC 080~150 C/CR has been designed with two separate refrigerant circuits, i.e. it has two compressors. By doing so, the unit has part loading capabilities, i.e. 0-50-100% of rated capacity. This will improve the reliability and energy efficiency of the unit, especially during low loading operations.

Tandem Compressors HydroTech Mini Chiller



This new line of innovative air cooled chiller by Acson International was designed with one purpose in mind, which is to offer user with cost and energy saving for users.

Better Performance

- Usage of higher efficient R-410A rotary compressors in tandem configuration
- Tight tolerances between moving parts resulting in high compressor volumetric efficiency
- Minimize mechanical losses
- Minimize gas flow losses and turbulence
- Optimize compressor oil return

Capacity Step Control

3 steps compressor loading
(0%-40%-60%-100%) for
A5AC 40 CR & A5AC 50 CR

2 steps compressor loading
(0%-50%-100%) for
A5AC 30 CR & A5AC 55 CR

Sequential Control

- Both compressors will cut in cut out depending on water temperature. This is possibly improving the compressor life cycle as well as the compressor reliability.

Elimination of Water Tank

- Combining the Tandem Compressors technology with the algorithm of the microprocessor control, water tank can be eliminated in most instances.

Choices of Single Phase and 3 Phase Power Supply Connection

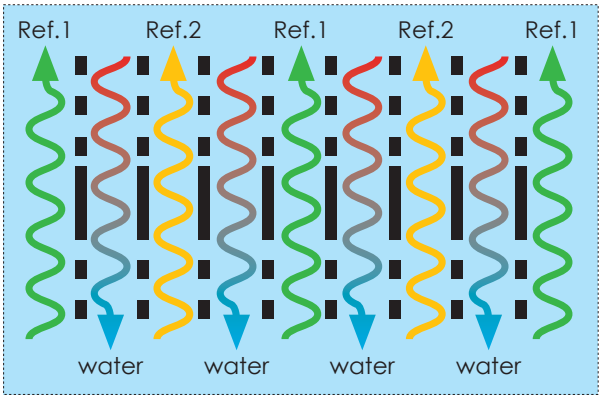
- Usage of single phase power supply compressors and circulating water pump.
- Offers flexibility to field installation.

The new series of Inverter Mini Chillers are specially designed / developed to achieve better system energy saving as well as towards perfect control during part load condition.

FEATURES

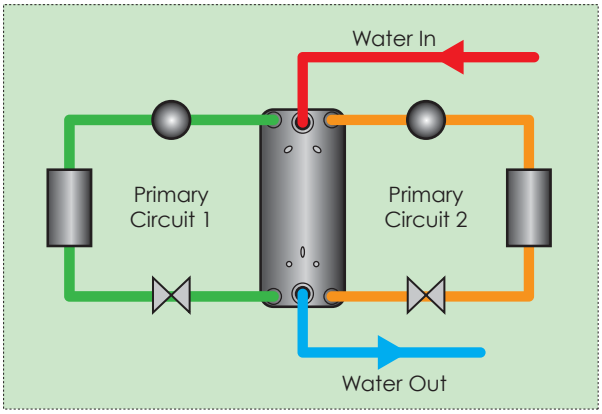
True Dual Circuits BPHE

The true dual BPHE puts the secondary circuit (water) in contact with 2 primary circuits (refrigerant). So even if one primary circuit is shut off, each secondary channel is still in contact with a primary channel. These advantages have made the product the natural choice for flexible chillers, climate control applications and high- precision systems food cooling cabinets in supermarkets.



Inverter Compressor

Inverter compressor is programmed to run at the optimum speed, which is regulated by the input frequency as it can varies according to the heat load requirement.



Advantages of inverter compressor applications are:

- **Less Start & Stop** - Frequency regulated compressor resulting in lesser in the sense of start and stop of compressor, which is greatly reduce the energy consumption.

- **Fast cooling/Heating** - Unlike the other conventional systems, inverter compressor has the ability to produce faster cooling/ heating capacity at the frequency higher than the dominant capacity frequency.

- **Better Compressor Reliability** - Reliability of inverter compressor is always better since there is lesser ON/OFF of the system especially during the low load condition.

- **Low Starting Surge** - Reliability of inverter compressor is always better since there is lesser ON/OFF of the system especially during the low load condition.

Elimination of Water Tank

Inverter compressor require lower starting torque and thus, resulting in lower starting current.

Built In Fan Speed

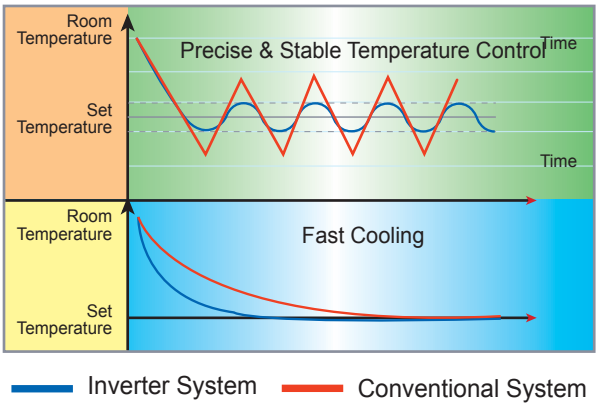
Fan speed is now controlled by the built in algorithm, resulting in cost saving since installation of external FSC (Fan Speed Controller) can be exempted. It is regulated at 100%, 70% and 50% based on the ambient and outdoor condensing temperature.

Safety Protection

- High & Low Pressure Switches
- Anti-Freeze Protection Sensor
- Discharge Temperature Sensor
- Over Pressure Relief Valve
- Water Pressure Differential Switch
- Anti-Freeze Heater on BPHE
- Compressor, Water Pump Overload Protector

Anti Corrosion Heat Exchanger

Gold Aluminum fin is offered as the standard material of the condenser heat exchanger of this series of chiller.



Modular Installation

A network up to 50 chillers in a system is possible. Control on the operation of the chillers will be done through the microprocessor controller. The external water piping connection can be made either from the left or right side of the unit.

Chiller Panel comes as the standard controller.

Compatible with HydroIntel

HydroTech

Chilled Water Fan Coil Units

To complement the new innovative HydroTech range of air cooled chillers, Acson International is offering an extensive range of chilled water fan coil units that will meet most of indoor application requirements covering residential, light commercial and commercial.

The aesthetically attractive decorative fan coil units such as Wall Mounted models, Ceiling Cassette and Ceiling Convertible is compact and ergonomic, the ranges can blend in easily to any interior designs whether it is residential houses, office, restaurant or shops.

In addition, the HydroTech chilled water fan coil units are designed with easy installation and easy servicing in mind. The fan coil units also include the microprocessor controller that has built in algorithm to control the operation of the fan coil unit as well as to provide protection to the unit.

HydroTech Chilled Water Fan Coil Units Range

Wall Mounted Range

STANDARD

G18 Wireless Controller

OPTIONAL

SLM Wired Controller

AC-5300 Wireless Controller

AWM 05/10/15/20/25 GW

AWM 301 W

FEATURES:

- ✓ Slim and compact
- ✓ Wide capacity range
- ✓ Wide air flow range
- ✓ Incorporated with NanoShield (except AWM301W)
- ✓ Able to communicate with the versatile HydroNIM for fan coil units networking
- ✓ Light weight
- ✓ Detachable and washable air intake grille
- ✓ Microprocessor control
- ✓ Self diagnosis features
- ✓ Automatic air swing
- ✓ Wireless Control as standard
- ✓ Mode selection, fan speed, 24 hours real timers
- ✓ Optional wired controller

Ceiling Cassette Range

STANDARD

G18 Wireless Controller

OPTIONAL

Netware III Wired Controller

ACK 10/15/20 CW

2 Pipes System:
ACK 20/25/30/40/50 AW

4 Pipes System:
ACKK 20/25/30/40/50 AWH

FEATURES:

- ✓ 3 range of ceiling cassette to be chosen from.
  - ACK-CW - 570mm (w) x 570mm (l)
  - ACK-AW - 820mm (w) x 820mm (l)
- ✓ Aesthetically attractive and slim front panel
- ✓ 4 way air discharge to provide better air distribution to room
- ✓ Automatic air swing
- ✓ 4 pipes system is available for model ACK20/25/30/40/50AWH
- ✓ Easy servicing and maintenance
- ✓ Built in high pressure head drain pump
  - ability to pump up condensate water to 700mm high
- ✓ Built in water float switch to protect the unit from problems of condensate water overflow
- ✓ Microprocessor control
- ✓ Able to communicate with the versatile HydroNIM for fan coil units networking
- ✓ Self diagnosis feature
- ✓ Wireless Control as standard
  - Mode selection, fan speed, 24 hours real timers
- ✓ Optional wired controller

Ceiling Convertible Range

RCM 07/10/15 CBW (Ceiling Exposed Only)

RCM 20/25/40/50 DW

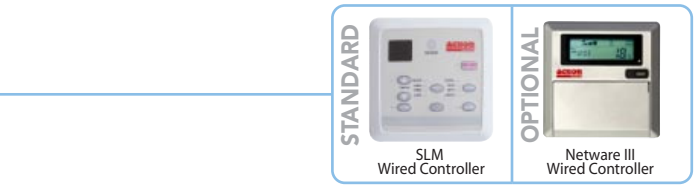
ACM 15/20/25 EW

FEATURES:

- ✓ Ceiling Convertible feature offers flexibility on installation
  - Installation method of under ceiling or floor standing*
- ✓ 2 way air discharge** ensure better air distribution
  - horizontal air throw and bottom air throw
- ✓ Automatic Air swing*
- ✓ Aesthetically attractive with round profile outlook fits in to any indoor architectural
- ✓ Strong air flow volume and strong air throw distance makes it a perfect choice for light commercial such as restaurant and shop
- ✓ Microprocessor control
- ✓ Able to communicate with the versatile HydroNIM for fan coil units networking
- ✓ Self diagnosis feature
- ✓ Wireless Control as standard
  - Mode selection, fan speed, 24 hours real timers
- ✓ Optional wired controller

* Applicable for RCM30-50DW and ACM15-25EW models only
** Applicable for RCM30-50DW models only

Ceiling Concealed Range

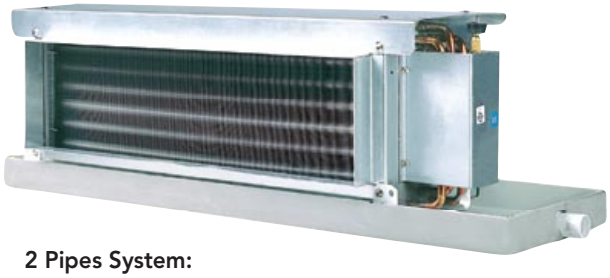


ACC 10/15/20/25/30/40/50/60 CW

FEATURES:

- ✓ Wide capacity range
- ✓ 4 speed fan motor offers flexibility for installation to suit application
  - Each speed will offer different external static pressure and air flow
- ✓ High External Static Pressure is available up to 18mm
- ✓ Extra secondary drain pan to provide protection against condensate water leaking
- ✓ Availability of various optional duct accessories specially designed to fit to ACC-CW range
- ✓ Microprocessor control
- ✓ Filter adaptor kit of 1 inch is available as optional accessory
- ✓ Able to communicate with the versatile HydroNIM for fan coil units networking
- ✓ Self diagnosis feature
- ✓ Wired Control as standard
  - Mode selection, fan speed selection

Ceiling Concealed Range



2 Pipes System:
ACW 200/300/400/600/800/1000/1200 C

4 Pipes System:
ACW 200/300/400/600/800/1000/1200 CH

FEATURES:

- ✓ Wide capacity range
- ✓ Multiple rooms can be cooled by just 1 unit of ACW
- ✓ Simple design with easy serviceability feature
- ✓ Extremely low height of unit – 251mm for complete range
- ✓ Water piping connection can be easily converted from one side to the other
- ✓ Fan motor assembly is not cased, allowing free return or back return or bottom return with optional return plenum
- ✓ Availability of optional extended drain to receive the condensate water dripping from the water piping connection
- ✓ Availability of 4 pipes ACW weries
- ✓ Other optional accessory available:
  - Wired thermostat
  - Choice of external static pressure (ESP)
  - Four types of ESP are available: 0Pa, 30Pa, 60Pa, 80Pa.
  - PTC (Positive Temperature Coefficient) electric heater
  - 2 way & 3 way valves

Ducted Blower Range

ADB 75/100/125/150 BW

FEATURES:

- ✓ These units are design with high air flow and high external static pressure, enables adequate distribution of air to the desired space
- ✓ Multiple rooms can be cooled by just 1 unit of ADB
- ✓ Simple design with easy serviceability feature
- ✓ The robust unit is designed with durability and reliability in mind
- ✓ ADB125/150BW is using the belt driven fan motor and blower fan thus it offers flexibility for upgrading should higher air flow is required
- ✓ ADB150BW is designed to cater for either horizontal air discharge or vertical air discharge

Optional Accessories (ACC10CW~ACC25CW)

Return Bracket Assembly come with Adaptor
(ACC 10CW - 1 outlet; ACC 15~20CW - 2 outlets)

Adaptor
Discharge and Return

Y-Joint

Return Grille Assembly come with Adaptor

(Front View)

Supply Grille Assembly come with Adaptor

(Side View)

(Front View)

HydroIntel Controller

By adopting the HydroTech chilled water system, the comfort in residential and light commercial buildings such as offices, hospital, restaurant, hotel and shopping complex can be controlled and managed from just one point, that is through the smart "HydroIntel Controller".

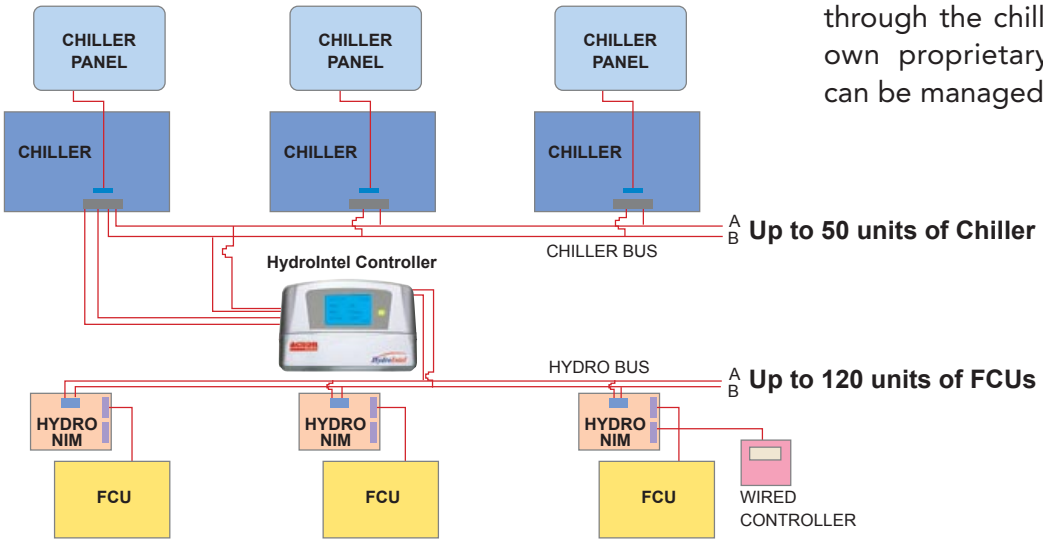
The HydroIntel controller is acting as a center to manage the operation of both the chilled water fan coil units and the chillers.

Besides allowing the user to have customized control for each connected unit, the smart HydroIntel controller is also able to manage the overall system operating mode of all units based on the air conditioning system load demand of the building.

FEATURES

Supported up to 50 Chillers & 120 Fan coil units.

Through the versatile HydroIntel controller, the operation of each equipments in the HydroTech chilled water system connected through the chiller Bus and Acson own proprietary HydroNIM BUS can be managed and controlled.

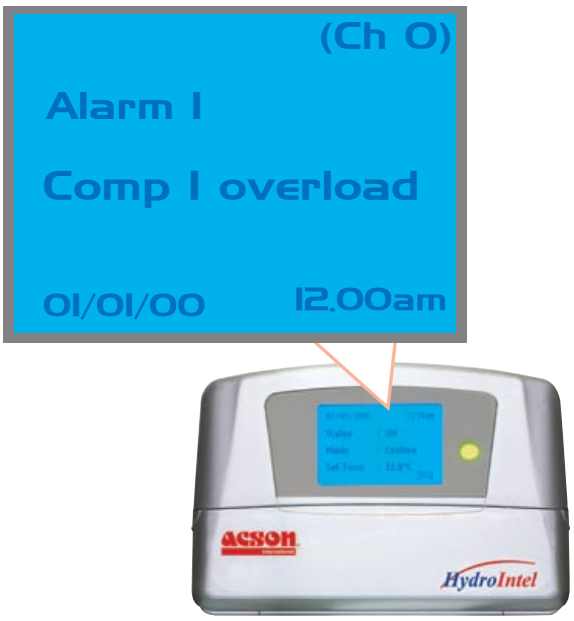


Display Up To 46 Types Of Chiller Fault/Alarm And 6 Types Of FCU Fault/Alarm

Whenever a fault occurred in either the chiller or fan coil unit, a signal will be sent to HydroIntel controller and an alarm message will appear on the LCD, showing type of alarm, alarm occurred time, date and unit.

This will greatly ease the troubleshooting process and thus reduce the valuable time of service technicians.

As soon as the fault is being solved, the alarm will automatically dissolve from the LCD.



Priority Settings

Depending on the application requirement, the HydroIntel controller offers the flexibility to allow user to set the priority on the operation of fan coil unit and Chiller in a complete HydroTech chilled water product system.

If priority is set to fan coil unit, the chiller will be forced to OFF if all fan coil units are OFF. If Chiller Priority is being set, all fan coil units will be OFF if chillers are OFF.

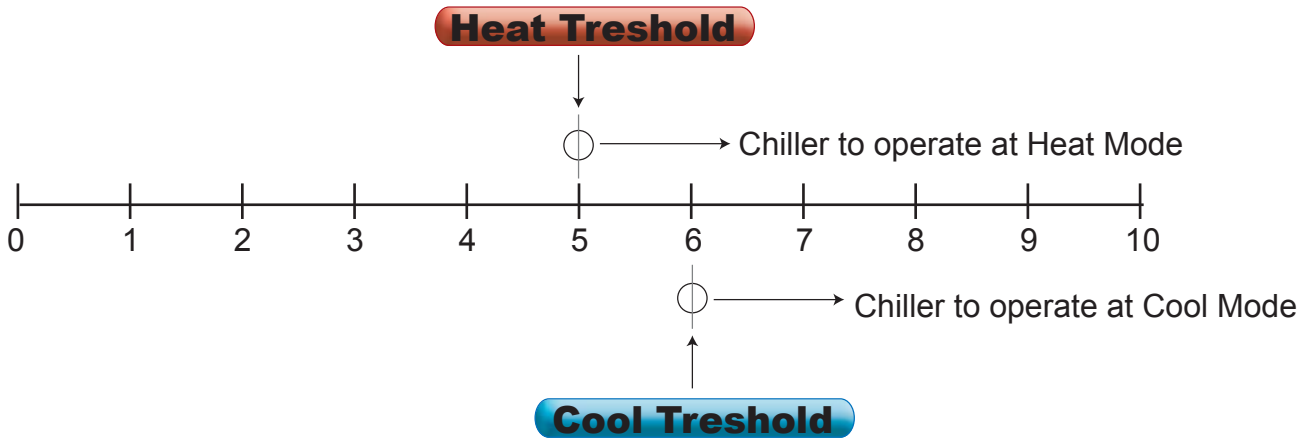
Threshold Value Setting

If the priority setting is being preset to fan coil unit, the operating mode of the complete HydroTech Chilled water system can be synchronized to operate under one same mode. This is achievable through the unique feature called "Threshold Value Setting"

HydroIntel Controller can command chiller operating mode to switch from current operating mode if the threshold value is meet.

Example,

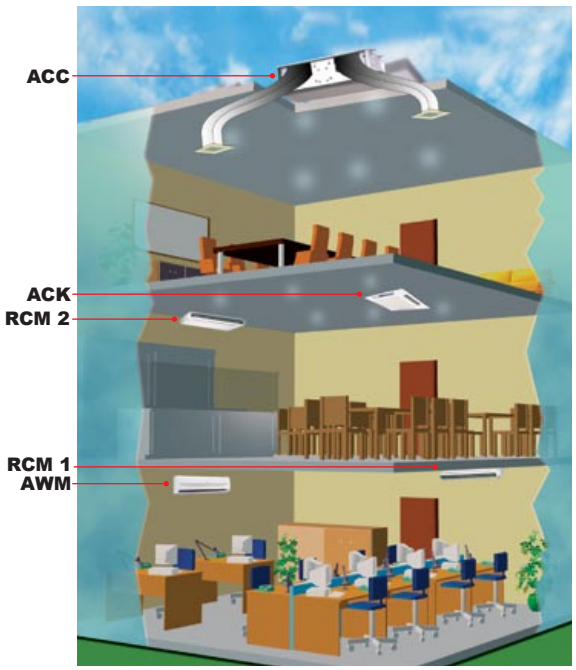
In a network of 10 fan coil units that is currently operating in COOL mode and a threshold of 60% was set for COOL mode and threshold of 50% was set for HEAT mode. Should 6 of the fan coil units are requesting for HEAT mode then the threshold for HEAT is crossed. Signal will be sent by HydroIntel to chiller BUS to switch the operating mode of all chillers to HEAT mode. Requirement of users will be met.

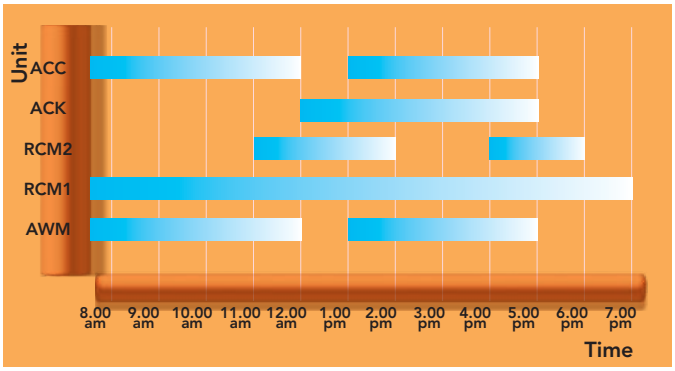


Energy Saving Programmable Timer

The operation of the chiller and each fan coil unit can be preset to operate and to stop at different time schedule and at different day of a week. Taking consideration of the fact that certain rooms in a building will be empty at certain period of the day, setting timer to On and to Off the operation of units in those areas will greatly reduce the energy cost of the building.

At the same time, the HydroIntel controller allows setting up to five sets of 7 days programmable operating schedules (2 On/Off timer per day) for each fan coil unit.



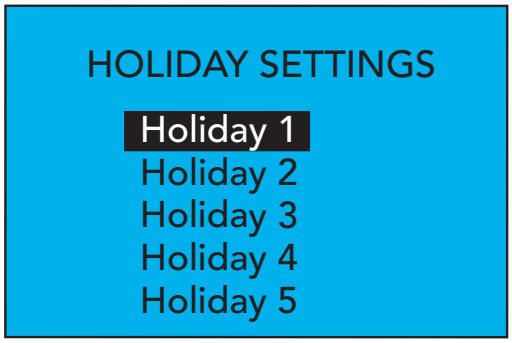


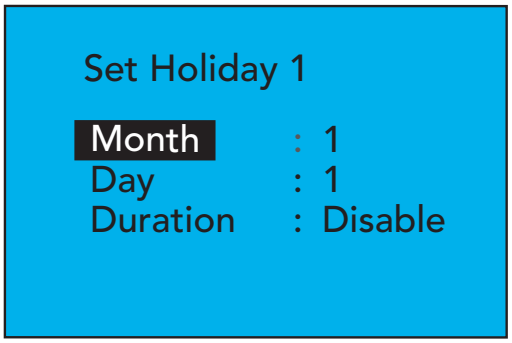
Holiday Setting

While designing the HydroIntel controller, the practical aspects of equipment application were always the key points to be considered. Thus resulting in the creation of "Holiday Setting" feature.

In this feature, users are allowed to set up to 10 holiday timers with each timer can last for duration of 99 days.

During the duration of Holiday Timer set earlier, all fan coil units and chiller will automatically be turned Off.





Memory Backup (EEPROM), Alarm Memory for Chiller and FCU

When there is power failure occurs during operation, HydroIntel Controller will load the last state memory from EEPROM after power On reset.

Besides, extra memory space inside the HydroIntel controller will allow user to view the previous alarm records even though its have been dissolved. This useful information will benefit the service technician to view the history of maintenance record done to the unit.

Password Protection for advanced parameter settings (Chiller)

A HydroTech chilled water product system with key parameters that were set by personnel to optimize operating conditions will need to be protected against any unauthorized disturbance or changes. The built in "Password Settings" feature will prevent the losing of key parameter settings in the HydroIntel controller.

Low Power Mode (Chiller + FCU)

HydroIntel controller will turn into low power mode during electricity power breakdown. It will operate based on the built in backup battery and only one timer and interrupt is active. CPU operation is Off and no display on LCD as well for energy saving purpose.

Key Parameter Display

For easy serviceability and maintenance, HydroIntel Controller's is able to display the key parameter such as defrost and compressor discharge sensor temperature, water in/out temperature, status of compressor On/Off, Cool/Heat mode water in temperature, etc. Thus, it reduces the cumbersome of requiring the service technicians to physically go to site of chiller installation to do the troubleshooting process.

Accumulative compressor run time

User can also check the compressor run time of chiller in HydroIntel Controller. It will provide a guideline as well as posting a reminder for requirement of routine system service.

Real Time Clock (RTC)

RTC will always appear at the summary pages and the user is able to set the time and date.

HydroNIM Networking Control System (optional)

For multiple fan coil unit installation in an office, a centralised controlled operation can be achieved through the Acson proprietary HydroNIM networking system.

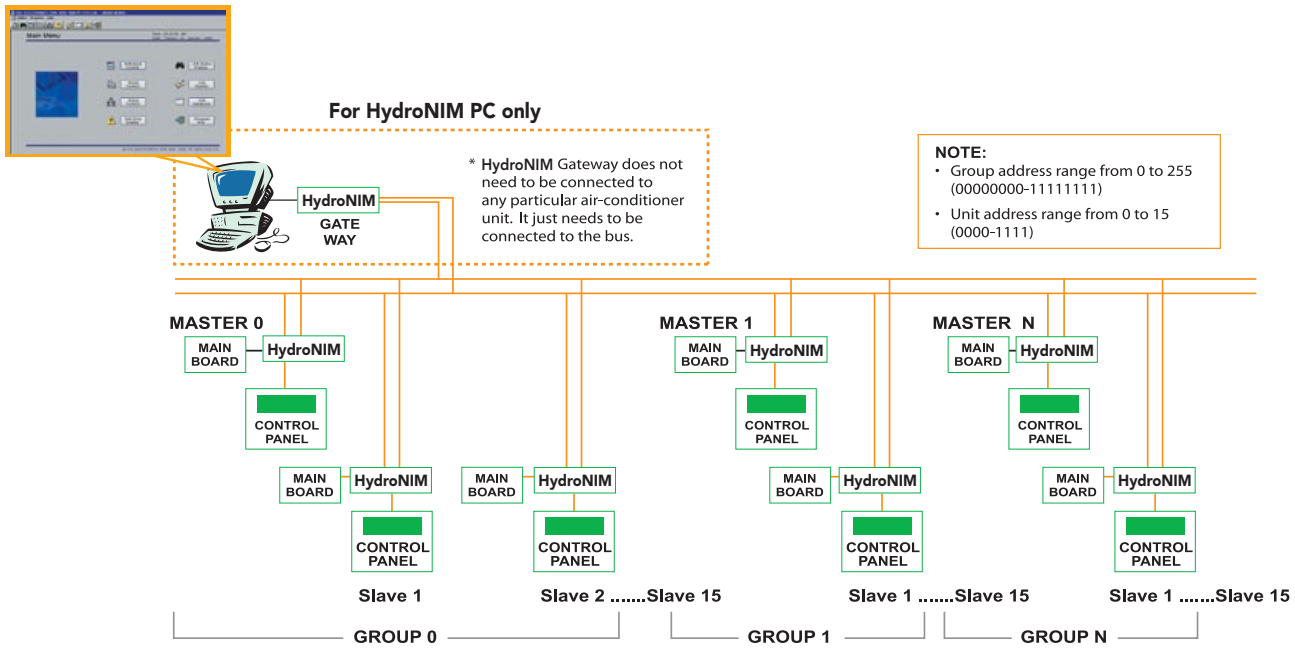
Network Interface Module (HydroNIM) is a networking system which enables communication among Acson air conditioners.

With the HydroNIM, all your air conditioning systems can be controlled with just a single controller giving you boundless benefits:

BENEFITS

- Ultimate convenience. No more individually controlling air conditioning units
- Quick and easy zone control from the master control unit
- Better control of air conditioning systems operating conditions

HydroNIM utilizes master-slave type system whereby the master node will issue commands to each of the slave nodes.



HydroNIM PC for Global Control Hub

With HydroNIM PC, a personal computer will act as a centralised unit for both controlling and monitoring of all the air conditioning units in the HydroNIM network.

For controlling, settings can be set from the PC and send out to the system for execution. While for monitoring, there is a graphical user interface for displaying the status of each unit.

The HydroNIM PC provides a Global Control Hub that offers control for better system management:

- Easy to operate full graphical user interface.
- Control units globally, as a group, or as individual units.
- Configure a super master unit.
- Support up to 42 On/Off timers per week.
- Real time monitoring of online units.
- Error diagnostic and alerting features for all units.
- Data logging and printing ability.
- Database to store unit location.
- Login protected by password.

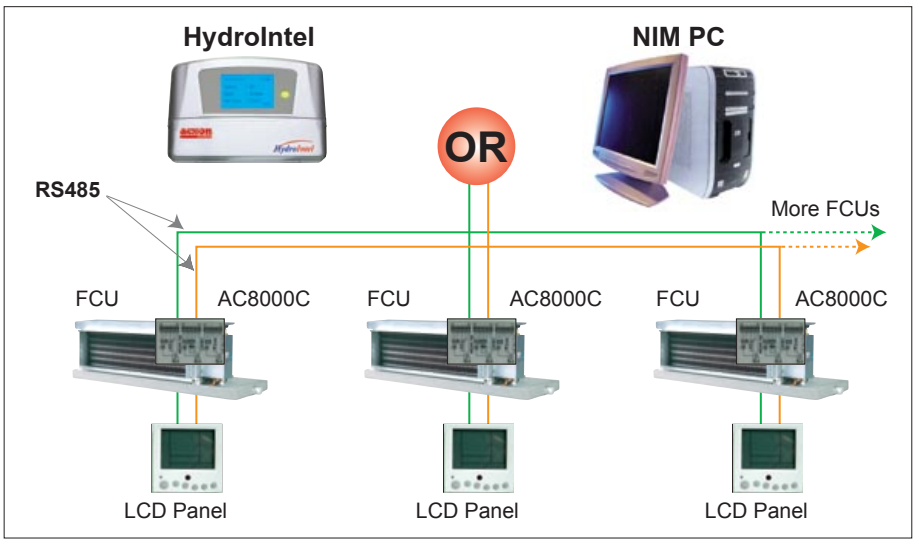
AC8100A and AC8000C

AC8100A

AC8000C (Nerwork Controller)

A new developed thermostat series, AC8100A is now available to be ordered as Chilled Water Fan Coil unit controller, inclusive of AC8100A and AC8000C. Its adopt micro-computer technology and is designed for the easier of installation.

AC8100A practises the most simple and conventional installation method where it consists of a wired controller and a power board. Both of its are attached together while being installed.



Same with AC8100A, AC8000C also consist of a wired controller and a power board, but the power board is attached to the fan coil unit while the wired controller will be installed away from it. Moreover AC8000C has the networking capability, with compatibility to the Network Interface Module (NIM); better control over whole operating system can be achieved as it offers quick and easy zone control from the master operating unit.

AC8100A Features:

- **Four Operating Modes:** Cool/Fan/Heat/Auto
- **Variable Indoor Fan Speed Selection:** High /Medium/Low/Auto
- **Selectable Function:**
  1) Cooling only
  2) Cooling and Heating (2 pipes) *
  3) Cooling and Heating (4 pipes)
- **LCD display**
- **LED indication of power supply**
- **7 days programmable timer**
- **Real time clock**
- **Selectable room temperature / Set temperature display (in °C or °F)**
- **Temperature setting range from 16°C to 30°C (60°F to 80°F)**

** Standard is with 4 pipes setting. For 2 pipes application, user might need to do jumper setting.*

Additional Features for AC8000C:

- **Networking capability**
- **Last state memory backup**
- **Auto random restart**

AC8000C is compatible with Smart Manager and NIM PC. By using RS485 cable, it can easily form a NIM bus as described in schematic diagram above

Mini Chiller Specifications

AMAC20C - AMAC60C (Cooling Only, R-22)

MODEL				AMAC20C	AMAC25C	AMAC30C	AMAC40C	AMAC50C	AMAC60C
NOMINAL COOLING CAPACITY			Btu/h	18000	23500	30000	39500	48500	54000
			W	5275	6887	8790	11580	14210	15830
NOMINAL TOTAL INPUT POWER			W	2669	2730	3520	4508	5150	5780
POWER SOURCE			V/Ph/Hz	220-240 / 1 / 50			380-415 / 3 / 50		
REFRIGERANT TYPE				R-22					
CONTROL				CAPILLARY TUBE					
UNIT DIMENSION	HEIGHT		mm/in	800 / 31.5			1410 / 55.5		
	WIDTH		mm/in	1160 / 45.7			1160 / 45.7		
	DEPTH		mm/in	460 / 18.1			460 / 18.1		
UNIT WEIGHT			kg/lb	116 / 256	123 / 271	188 / 414	188 / 414	190 / 417	196 / 432
SOUND PRESSURE LEVEL			dBA	57	57	58	59	59	59
NOMINAL WATER FLOW			l/s/ m^3/hr	0.25 / 0.9	0.33 / 1.2	0.42 / 1.51	0.56 / 2.0	0.67 / 2.4	0.74 / 2.7
PIPING CONNECTION JOINT TYPE and SIZE			mm/in	BSPT 25.4 / 1					
TANK	MATERIAL			CAST IRON / STAINLESS STEEL					
	CAPACITY/VOLUME		L / ft^3	22 / 0.78			40 / 1.41		
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)				0 - 100%					

AMAC20CR - AMAC60CR (Heatpump, R-22)

MODEL				AMAC20CR	AMAC25CR	AMAC30CR	AMAC40CR	AMAC50CR	AMAC60CR
NOMINAL COOLING CAPACITY			Btu/h	18000	23000	27500	38000	44000	53000
			W	5360	6740	8060	11140	12900	15530
NOMINAL HEATING CAPACITY			Btu/h	22000	25000	35000	43000	50000	59000
			W	6570	7330	10260	12602	14650	17292
NOMINAL TOTAL INPUT POWER	COOLING		W	2610	2800	3450	4300	5250	6270
	HEATING		W	2700	2630	3430	4450	5150	5960
POWER SOURCE			V/Ph/Hz	220-240 / 1 / 50			380-415 / 3 / 50		
REFRIGERANT TYPE				R-22					
CONTROL				CAPILLARY TUBE					
UNIT DIMENSION	HEIGHT		mm/in	800 / 31.5			1410 / 55.5		
	WIDTH		mm/in	1160 / 45.7			1160 / 45.7		
	DEPTH		mm/in	460 / 18.1			460 / 18.1		
UNIT WEIGHT			kg/lb	116 / 256	123 / 271	128 / 282	195 / 430	197 / 433	203 / 448
SOUND PRESSURE LEVEL			dBA	57	57	58	59	59	61
NOMINAL WATER FLOW	COOLING		l/s/ m^3/hr	0.25 / 0.9	0.32 / 1.2	0.39 / 1.4	0.56 / 2.0	0.61 / 2.2	0.74 / 2.7
	HEATING		l/s/ m^3/hr	0.31 / 1.1	0.35 / 1.3	0.44 / 1.6	0.56 / 2.0	0.61 / 2.2	0.83 / 3.0
PIPING CONNECTION JOINT TYPE and SIZE			mm/in	BSPT 25.4 / 1					
TANK	MATERIAL			CAST IRON / STAINLESS STEEL					
	CAPACITY/VOLUME		L / ft^3	22 / 0.78			40 / 1.41		
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)				0 - 100%					

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - 12°C / 7°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 35°C AIR AMBIENT TEMPERATURE.
b) HEATING - 40°C / 45°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 7°C AIR AMBIENT TEMPERATURE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

Mini Chiller Specifications

AMAC80C - AMAC150C (Cooling Only, R-22)

MODEL				AMAC80C	AMAC100C	AMAC120C	AMAC150C
NOMINAL COOLING CAPACITY			Btu/h	85000	95000	116000	138000
			W	24910	27840	34000	40450
NOMINAL TOTAL INPUT POWER			W	9050	10800	11900	13740
POWER SOURCE			V/Ph/Hz	380-415 / 3 / 50			
REFRIGERANT TYPE				R-22			
CONTROL				TXV			
UNIT DIMENSION		HEIGHT	mm/in	1245 / 49.0			
		WIDTH	mm/in	1500 / 59.1		1800 / 70.9	
		DEPTH	mm/in	900 / 35.4		1150 / 45.3	
UNIT WEIGHT			kg/lb	340 / 750	340 / 750	460 / 1014	540 / 1190
SOUND PRESSURE LEVEL			dBA	63	63	67	69
NOMINAL WATER FLOW			l/s/ m^3/hr	1.22 / 4.4	1.36 / 4.9	1.67 / 6.0	2.00 / 7.2
PIPING CONNECTION JOINT TYPE and SIZE			mm/in	BSPT 31.75 / 1.25			
TANK	MATERIAL			NA			
	CAPACITY/VOLUME		L / ft^3	NA			
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)				0 - 50 - 100%			

AMAC80CR - AMAC150CR (Heatpump, R-22)

MODEL			AMAC80CR	AMAC100CR	AMAC120CR	AMAC150CR
NOMINAL COOLING CAPACITY		Btu/h	80000	95000	113000	138000
		W	23450	27840	33118	40450
NOMINAL HEATING CAPACITY		Btu/h	95000	105000	120000	132000
		W	27840	30770	35169	38686
NOMINAL TOTAL INPUT POWER	COOLING	W	8650	11200	11650	13840
	HEATING	W	8900	10500	11880	14530
POWER SOURCE		V/Ph/Hz	380-415 / 3 / 50			
REFRIGERANT TYPE			R-22			
CONTROL			CAPILLARY TUBE			
UNIT DIMENSION	HEIGHT	mm/in	1245 / 49.0			
	WIDTH	mm/in	1500 / 59.1		1800 / 70.9	
	DEPTH	mm/in	900 / 35.4		1150 / 45.3	
UNIT WEIGHT		kg/lb	340 / 750	340 / 750	480 / 1058	560 / 1235
SOUND PRESSURE LEVEL		dBA	63	63	67	69
NOMINAL WATER FLOW	COOLING	l/s/ m^3/hr	1.13 / 4.05	1.33 / 4.8	1.67 / 6.0	2.00 / 7.2
	HEATING	l/s/ m^3/hr	1.13 / 4.05	1.47 / 5.3	1.79 / 6.4	2.10 / 7.6
PIPING CONNECTION JOINT TYPE and SIZE		mm/in	BSPT 31.75 / 1.25			
TANK	MATERIAL		NA			
	CAPACITY/VOLUME	L / ft^3	NA			
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)			0 - 50 - 100%			

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - 12°C / 7°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 35°C AIR AMBIENT TEMPERATURE.
b) HEATING - 40°C / 45°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 7°C AIR AMBIENT TEMPERATURE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

Mini Chiller Specifications

A4AC20C - A4AC60C (Cooling Only, R-407C)

MODEL				A4AC20C	A4AC25C	A4AC30C	A4AC40C	A4AC50C	A4AC60C
NOMINAL COOLING CAPACITY			Btu/h	21000	23000	26900	38500	47500	50000
			W	6154	6740	7880	11280	13920	14650
NOMINAL TOTAL INPUT POWER			W	2617	2960	3770	4700	5450	6050
POWER SOURCE			V/Ph/Hz	220-240 / 1 / 50			380-415 / 3 / 50		
REFRIGERANT TYPE				R-407C					
CONTROL				CAPILLARY TUBE					
UNIT DIMENSION	HEIGHT		mm/in	800 / 31.5		1410 / 55.5			
	WIDTH		mm/in	1160 / 45.7		1160 / 45.7			
	DEPTH		mm/in	460 / 18.1		460 / 18.1			
UNIT WEIGHT			kg/lb	116 / 256	123 / 271	188 / 414	188 / 414	190 / 417	196 / 432
SOUND PRESSURE LEVEL			dBA	57	57	58	59	59	59
NOMINAL WATER FLOW			l/s/ m^3 /hr	0.29 / 1.0	0.32 / 1.2	0.38 / 1.4	0.53 / 1.9	0.64 / 2.3	0.7 / 2.5
PIPING CONNECTION JOINT TYPE and SIZE			mm/in	BSPT 25.4 / 1					
TANK	MATERIAL			CAST IRON / STAINLESS STEEL					
	CAPACITY/VOLUME		L / ft^3	22 / 0.78			40 / 1.41		
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)				0 - 100%					

A4AC60CR (Heatpump, R-407C)

MODEL				A4AC60CR
NOMINAL COOLING CAPACITY			Btu/h	51000
			W	15000
NOMINAL HEATING CAPACITY			Btu/h	60000
			W	17800
NOMINAL TOTAL INPUT POWER	COOLING		W	6530
	HEATING		W	6280
POWER SOURCE			V/Ph/Hz	380-415 / 3 / 50
REFRIGERANT TYPE				R-407C
CONTROL				CAPILLARY TUBE
UNIT DIMENSION	HEIGHT		mm/in	1410 / 55.5
	WIDTH		mm/in	1160 / 45.7
	DEPTH		mm/in	460 / 18.1
UNIT WEIGHT			kg/lb	203 / 448
SOUND PRESSURE LEVEL			dBA	61
NOMINAL WATER FLOW	COOLING		l/s/ m^3 /hr	0.71 / 2.6
	HEATING		l/s/ m^3 /hr	0.84 / 3.0
PIPING CONNECTION JOINT TYPE and SIZE			mm/in	25.4 / 1
TANK	MATERIAL			CAST IRON / STAINLESS STEEL
	CAPACITY/VOLUME		L / ft^3	40 / 1.41
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)				0 - 100%

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - 12°C / 7°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 35°C AIR AMBIENT TEMPERATURE.
b) HEATING - 40°C / 45°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 7°C AIR AMBIENT TEMPERATURE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

Mini Chiller Specifications

A4AC80C - A4AC150C (Cooling Only, R-407C)

MODEL				A4AC80C	A4AC100C	A4AC120C	A4AC150C
NOMINAL COOLING CAPACITY			Btu/h	80000	90000	115000	137000
			W	23450	26380	33700	40150
NOMINAL TOTAL INPUT POWER			W	9600	11400	11740	14490
POWER SOURCE			V/Ph/Hz	380-415 / 3 / 50			
REFRIGERANT TYPE				R-407C			
CONTROL				TXV			
UNIT DIMENSION		HEIGHT	mm/in	1245 / 49.0			
		WIDTH	mm/in	1500 / 59.1		1800 / 70.9	
		DEPTH	mm/in	900 / 35.4		1150 / 45.3	
UNIT WEIGHT			kg/lb	340 / 750	340 / 750	460 / 1014	540 / 1190
SOUND PRESSURE LEVEL			dBA	63	63	67	69
NOMINAL WATER FLOW			l/s/ m^3/hr	1.14 / 4.1	1.25 / 4.5	1.67 / 6.0	2.00 / 7.2
PIPING CONNECTION JOINT TYPE and SIZE			mm/in	BSPT 31.75 / 1.25			
TANK	MATERIAL			NA			
	CAPACITY/VOLUME		L / ft^3	NA			
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)				0 - 50 - 100%			

A4AC80CR - A4AC150CR (Heatpump, R-407C)

MODEL				A4AC80CR	A4AC100CR	A4AC120CR	A4AC150CR
NOMINAL COOLING CAPACITY			Btu/h	74000	87500	110000	130000
			W	21700	25640	32240	38100
NOMINAL HEATING CAPACITY			Btu/h	90000	96000	118000	144000
			W	26400	28140	34600	42200
NOMINAL TOTAL INPUT POWER		COOLING	W	9200	11300	12200	15500
		HEATING	W	9500	11300	12300	15700
POWER SOURCE			V/Ph/Hz	380-415 / 3 / 50			
REFRIGERANT TYPE				R-407C			
CONTROL				TXV			
UNIT DIMENSION		HEIGHT	mm/in	1245 / 49.0			
		WIDTH	mm/in	1500 / 59.1		1800 / 70.9	
		DEPTH	mm/in	900 / 35.4		1150 / 45.3	
UNIT WEIGHT			kg/lb	340 / 750	340 / 750	460 / 1014	540 / 1190
SOUND PRESSURE LEVEL			dBA	63	63	67	69
NOMINAL WATER FLOW		COOLING	l/s/ m^3/hr	1.03 / 3.7	1.23 / 4.41	1.67 / 6.0	2.00 / 7.2
		HEATING	l/s/ m^3/hr	1.03 / 3.7	1.35 / 4.84	1.79 / 6.4	2.10 / 7.6
PIPING CONNECTION JOINT TYPE and SIZE			mm/in	BSPT 31.75 / 1.25			
TANK	MATERIAL			NA			
	CAPACITY/VOLUME		L / ft^3	NA			
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)				0 - 50 - 100%			

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - 12°C / 7°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 35°C AIR AMBIENT TEMPERATURE.
b) HEATING - 40°C / 45°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 7°C AIR AMBIENT TEMPERATURE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

Mini Chiller Specifications

A5AC20CR - A5AC55CR (Heatpump, R-410A)

MODEL			A5AC20CR	A5AC25CR	A5AC30CR	A5AC40CR	A5AC50CR	A5AC55CR
NOMINAL COOLING CAPACITY		Btu/h	17000	21000	26800	37000	45000	50000
		W	5000	6200	7900	10800	13190	14700
NOMINAL HEATING CAPACITY		Btu/h	21500	25000	32500	43000	48000	55000
		W	6300	7300	9500	12600	14100	16100
NOMINAL TOTAL INPUT POWER	COOLING	W	2550	2760	3720	4850	5180	5320
	HEATING	W	2590	2790	3630	4650	5150	5440
POWER SOURCE		V/Ph/Hz	220-240 / 1 / 50		220-240 / 1 / 50 or 380-415 / 3 / 50			
REFRIGERANT TYPE			R-410A					
CONTROL			CAPILLARY TUBE		CAPILLARY TUBE & TXV			
UNIT DIMENSION	HEIGHT	mm/in	800 / 31.5		790 / 31.1	1410 / 55.5	1410 / 55.5	
	WIDTH	mm/in	1160 / 45.7		1010 / 39.8	1059 / 41.7	1059 / 41.7	
	DEPTH	mm/in	460 / 18.1		460 / 18.1	460 / 18.1	460 / 18.1	
UNIT WEIGHT		kg/lb	125 / 276	165 / 364	125 / 276	165 / 364	167 / 368	173 / 381
SOUND PRESSURE LEVEL		dBA	57	57	58	59	59	60
NOMINAL WATER FLOW	COOLING	l/s/ m^3 /hr	0.23 / 0.84	0.28 / 1.00	0.42 / 1.5	0.50 / 1.8	0.60 / 2.15	0.72 / 2.6
	HEATING	l/s/ m^3 /hr	0.32 / 1.16	0.35 / 1.25	0.42 / 1.5	0.50 / 1.8	0.60 / 2.15	0.72 / 2.6
PIPING CONNECTION JOINT TYPE and SIZE		mm/in	BSPT 25.4 / 1					
TANK	MATERIAL		CAST IRON / STAINLESS STEEL		NA			
	CAPACITY/VOLUME	L / ft^3	22 / 0.78		NA			
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)			0 - 100%		0 - 50 - 100%	0 - 40 - 60 - 100%		0 - 50 - 100%

A5ACV30CR - A5ACV135CR (Inverter Heatpump, R-410A)

MODEL			A5ACV30CR	A5ACV55CR	A5ACV75CR	A5ACV100CR	A5ACV135CR	A5ACV210CR
NOMINAL COOLING CAPACITY		Btu/h	27000	50000	70000	95000	131500	200000
		W	7900	14700	20500	27800	38540	58600
NOMINAL HEATING CAPACITY		Btu/h	33000	55000	75000	100000	141500	210000
		W	9700	16100	22000	29300	41500	61600
NOMINAL TOTAL INPUT POWER	COOLING	W	5370	7350	9050	12000	15750	22300
	HEATING	W	4510	5850	7900	11400	16250	21800
POWER SOURCE		V/Ph/Hz	220-240 / 1 / 50	380-415 / 3 / 50				
REFRIGERANT TYPE			R-410A					
CONTROL			ELECTRONIC EXPANSION VALVE (EXV)			EXV / CAPILLARY TUBE		
UNIT DIMENSION	HEIGHT	mm/in	790 / 31.1	1410 / 55.5	1460 / 57.5	1245 / 49	1245 / 49	1786 / 70
	WIDTH	mm/in	1010 / 39.8	1010 / 39.8	1150 / 45.3	1500 / 59	1800 / 70	2093 / 82
	DEPTH	mm/in	460 / 18.1	460 / 18.1	550 / 21.7	900 / 35	1150 / 45	1192 / 47
UNIT WEIGHT		kg/lb	128 / 282	195 / 430	200 / 440	405 / 893	525 / 1157	682 / 1504
SOUND PRESSURE LEVEL		dBA	59	62	65	63	67	67
NOMINAL WATER FLOW	COOLING	l/s/ m^3 /hr	0.3 / 1.3	0.7 / 2.5	0.9 / 3.4	1.3 / 4.8	1.8 / 6.6	2.7 / 9.6
	HEATING	l/s/ m^3 /hr	0.4 / 1.5	0.8 / 2.7	1.0 / 3.7	1.4 / 5.0	2.0 / 7.1	2.9 / 10.3
PIPING CONNECTION JOINT TYPE and SIZE		mm/in	BSPT 31.75 / 1.25					BSPT 38.10 / 1.5
TANK	MATERIAL		NA					
	CAPACITY/VOLUME	L / ft^3	NA					
COMPRESSOR STAGE OF CAPACITY CONTROL (Btu/h)			0 - 100%			0 - 50 - 100%	0 - 50 - 100%	0 - 20 - 40 - 60 - 100%

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - 12°C / 7°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 35°C AIR AMBIENT TEMPERATURE.
b) HEATING - 40°C / 45°C ENTERING / LEAVING EVAPORATOR WATER TEMPERATURE, 7°C AIR AMBIENT TEMPERATURE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

Chilled Water Fan Coil Unit Specifications

ACK20AW - ACK50AW (Ceilling Cassette A Series)

MODEL				ACK20AW	ACK25AW	ACK30AW	ACK40AW	ACK50AW
50HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	22500	25500	30000	33500	36500
			W	6620	7500	8800	9950	10800
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	16700	18400	21800	24200	26300
			W	4900	5400	6400	7100	7700
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	28500	32000	37500	40500	44000
			W	8400	9500	11000	12000	12900
	NOMINAL AIR FLOW	HIGH	l/s / CFM	364 / 771	383 / 812	433 / 918	483 / 1024	511 / 1083
		MEDIUM	l/s / CFM	314 / 665	328 / 695	367 / 777	425 / 901	467 / 989
		LOW	l/s / CFM	297 / 630	297 / 630	336 / 712	372 / 789	428 / 906
	NOMINAL WATER FLOW RATE		USGPM	5.02	5.68	6.65	7.53	8.19
			LITRES/M	19.00	21.55	25.23	28.52	30.97
	POWER SOURCE		V/Ph/Hz	220-240/1/50				
	TOTAL INPUT POWER		W	127	151	164	192	253
60HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	24000	26000	29500	35000	40000
			W	7030	7620	8640	10250	11720
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	30000	32000	36000	39000	42000
			W	8790	9380	10550	11430	12310
	NOMINAL AIR FLOW	HIGH	l/s / CFM	350 / 740	369 / 779	416 / 879	468 / 989	492 / 1040
	NOMINAL WATER FLOW RATE		USGPM	5.51	5.81	6.70	7.31	7.49
			LITRES/M	20.83	22.00	25.33	27.67	28.33
	POWER SOURCE		V/Ph/Hz	208-230/1/60				
	TOTAL INPUT POWER		W	132	155	198	306	312
UNIT DIMENSION - ( ) WITH PANEL		HEIGHT	mm/in	335 / 13.2 (363 / 14.3)				
		WIDTH	mm/in	820 / 32.3 (930 / 36.6)				
		DEPTH	mm/in	821 / 32.3 (930 / 36.6)				
UNIT WEIGHT (UNIT + PANEL)			kg/lb	(31+4) / (68.2+8.8)	(32+4) / (70.4+8.8)	(35+4) / (77+8.8)	(38+4) / (83.6+8.8)	(40+4) / (88+8.8)
SOUND PRESSURE LEVEL (H/M/L)			dBA	42 / 39 / 37	45 / 42 / 40	49 / 45 / 43	51 / 48 / 46	53 / 52 / 50
HEAD LOSS (COOLING)			kPa / psi	25 / 3.6	31 / 4.5	42 / 6	52 / 7.6	69 / 10
HEAD LOSS (HEATING) : 50°C			kPa / psi	21 / 3.1	27 / 3.9	35 / 5.1	45 / 6.6	64 / 9.3
CONNECTION				3/4" BSP FEMALE UNION				

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), LEAVING WATER TEMP. : 55°C (131°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. ACK20/025AW: POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA. ACK30/040/050AW: 1.5m BELOW THE FACIS (JIS B 8615).

ACK20AWH - ACK50AWH (4 Pipies Ceilling Cassette)

MODEL				ACK20AWH	ACK25AWH	ACK30AWH	ACK40AWH	ACK50AWH
50HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	13000	13500	15500	17100	17500
			W	3810	3960	4630	5010	5160
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	11600	12000	13900	15000	15500
			W	3400	3520	4070	4400	4540
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	36000	37500	42500	45500	46500
			W	10550	10990	12510	13480	13770
	NOMINAL AIR FLOW	HIGH	l/s / CFM	364 / 771	383 / 812	433 / 918	484 / 1024	511 / 1083
		MEDIUM	l/s / CFM	314 / 665	328 / 695	367 / 777	425 / 901	467 / 989
		LOW	l/s / CFM	297/ 630	297 / 630	336 / 712	372 / 789	428 / 906
	NOMINAL WATER FLOW RATE	Cooling	USGPM	2.90	3.00	3.52	3.80	3.92
			LITRES/M	10.92	11.35	13.27	14.37	14.80
		Add.Heat Exch	USGPM	4.00	4.18	4.76	5.10	5.20
			LITRES/M	15.12	15.75	17.93	19.32	19.73
	POWER SOURCE		V/Ph/Hz	220-240/1/50				
	TOTAL INPUT POWER		W	122	138	153	184	232
	UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	335 / 13.2 (363 / 14.3)				
		WIDTH	mm/in	820 / 32.3 (930 / 36.6)				
		DEPTH	mm/in	821 / 32.3 (930 / 36.6)				
	UNIT WEIGHT (UNIT + PANEL)		kg/lb	(31+4) / (68.2+8.8)	(32+4) / (70.4+8.8)	(35+4) / (77+8.8)	(38+4) / (83.6+8.8)	(40+4) / (88+8.8)
	SOUND PRESSURE LEVEL (H/M/L)		dBA	42 / 39 / 37	45 / 42 / 40	49 / 45 / 43	51 / 48 / 46	53 / 52 / 50
	HEAD LOSS (COOLING)		kPa / psi	4 / 0.5	4 / 0.5	5 / 0.7	6 / 0.8	6 / 0.9
	HEAD LOSS (HEATING) : 70°C		kPa / psi	5 / 0.7	6 / 0.8	7 / 1	9 / 1.2	9 / 1.3
	CONNECTION			3/4" BSP FEMALE UNION				

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 70°C (158°F), LEAVING WATER TEMP. : 75°C (167°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. ACK20/025AWH : POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA. BELOW THE FACIA. ACK30/040/050AW/AWH : 1.5m BELOW THE FACIA (JIS B 8615).

Chilled Water Fan Coil Unit Specifications

ACK10CW - ACK20CW (Ceilling Cassette C Series)

MODEL				ACK10CW	ACK15CW	ACK20CW
50HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	8000	14000	14500
			W	2340	4100	4250
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	6700	10400	11100
			W	1970	3060	3240
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	11000	17500	18500
			W	3220	5120	5420
	NOMINAL AIR FLOW	HIGH	l/s / CFM	184 / 390		203 / 430
		MEDIUM	l/s / CFM	175 / 371		193 / 409
		LOW	l/s / CFM	165 / 350		184 / 390
	NOMINAL WATER FLOW RATE		USGPM	1.76	3.13	3.21
			LITRES/M	6.70	11.75	12.18
	POWER SOURCE		V/Ph/Hz	220-240/1/50		
	TOTAL INPUT POWER		W	51.00	75.00	78.00
	UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	250 / 9.8 (295 / 11.6)		
		WIDTH	mm/in	570 / 22.4 (640 / 25.2)		
		DEPTH	mm/in	570 / 22.4 (640 / 25.2)		
	UNIT WEIGHT (UNIT + PANEL)		kg/lb	(22+2) / (48.5+4.4)	(23+2) / (50.6+4.4)	
	SOUND PRESSURE LEVEL (H/M/L)		dBA	44 / 43 / 42	44 / 42 / 41	47 / 46 / 44
	HEAD LOSS (COOLING)		kPa / psi	67 / 9.8	69 / 9.9	69 / 10
	HEAD LOSS (HEATING) : 50°C		kPa / psi	62 / 9	71 / 10.2	71.2 / 10.3
	CONNECTION			3/4" BSP FEMALE UNION		

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), LEAVING WATER TEMP. : 55°C (131°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA.

Chilled Water Fan Coil Unit Specifications

RCM07CBW - RCM15CBW (Ceilling Exposed)

MODEL				RCM07CBW	RCM10CBW	RCM15CBW
50 / 60HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	6500	8500	10500
			W	1910	2490	3080
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	5000	6700	8600
			W	1460	1960	2520
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	8000	11000	14500
			W	2340	3220	4250
	NOMINAL AIR FLOW	HIGH	l/s / CFM	94 / 200	142 / 300	190 / 400
		MEDIUM	l/s / CFM	82 / 173	134 / 280	156 / 330
		LOW	l/s / CFM	71 / 150	119 / 250	139 / 292
	NOMINAL WATER FLOW RATE		USGPM	1.45	1.89	2.33
			LITRES/M	5.49	7.15	8.82
	POWER SOURCE		V/Ph/Hz	220-240/1/50 , 208-230/1/60		
	TOTAL INPUT POWER		w	49.00	50.00	81.00
	UNIT DIMENSION	HEIGHT	mm/in	235 / 9.3		
		WIDTH	mm/in	666 / 26.2		
		DEPTH	mm/in	824 / 32.4		1174 / 46.2
	UNIT WEIGHT		kg/lb	33 / 72.8		35 / 77.2
	SOUND PRESSURE LEVEL (H/M/L)		dBA	45 / 42 / 37	46 / 43 / 38	47 / 44 / 39
	HEAD LOSS (COOLING)		kPa / psi	9 / 1.4	15 / 2.2	5 / 0.7
	HEAD LOSS (HEATING) : 50°C		kPa / psi	7.0 / 1.01	13 / 1.8	4 / 0.5
	CONNECTION			3/4" BSP FEMALE ADAPTOR		

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), LEAVING WATER TEMP. : 55°C (131°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. RCM20/025DW : POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT. RCM30/040/050DW : 1 m IN FRONT AND 1m BELOW THE VERTICAL CENTRE LINE OF THE UNIT (JIS B 8615). MCE007-015CBW: 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

RCM20DW - RCM50DW (Ceilling Convertible)

MODEL				RCM20DW	RCM25DW	RCM30DW	RCM40DW	RCM50DW
50HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	17700	20800	24600	31200	45000
			W	5190	6100	7210	9140	13190
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	13700	15000	17700	25600	31400
			W	4000	4400	5190	7500	9200
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	22000	25900	28000	42300	51500
			W	6450	7590	8210	12400	15090
	NOMINAL AIR FLOW	HIGH	l/s / CFM	264 / 560	297 / 630	329 / 697	451 / 956	500 / 1059
		MEDIUM	l/s / CFM	238 / 505	293 / 620	324 / 687	428 / 908	483 / 1023
		LOW	l/s / CFM	189 / 400	262 / 555	307 / 650	419 / 889	451 / 956
	NOMINAL WATER FLOW RATE		USGPM	3.92	4.62	5.46	6.91	9.99
			LITRES/M	14.84	17.49	20.67	26.16	37.82
	POWER SOURCE		V/Ph/Hz	220-240/1/50				
	TOTAL INPUT POWER		W	96.00	130.00	132.00	240.00	240.00
60HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	17700	20800	24600	31200	45000
			W	5190	6100	7210	9140	13190
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	22000	25900	28000	42300	51500
			W	6450	7590	8210	12400	15090
	NOMINAL AIR FLOW	HIGH	l/s / CFM	264 / 560	297 / 630	329 / 697	451 / 956	500 / 1059
	NOMINAL WATER FLOW RATE		USGPM	3.92	4.62	5.46	6.91	9.99
			LITRES/M	14.84	17.49	20.67	26.16	37.82
	POWER SOURCE		V/Ph/Hz	208-230/1/60				
	TOTAL INPUT POWER		W	104.00	163.00	163.00	306.00	306.00
UNIT DIMENSION - ( ) WITH PANEL		HEIGHT	mm/in	214 / 8.4		249 / 9.8		
		WIDTH	mm/in	1214 / 47.8			1714 / 67.5	
		DEPTH	mm/in	670 / 26.4				
UNIT WEIGHT (UNIT + PANEL)			kg/lb	43 / 94.8		45 / 99.2	70 / 154.3	
SOUND PRESSURE LEVEL (H/M/L)			dBA	50 / 47 / 40	54 / 53 / 50	51 / 50 / 48	54 / 53 / 52	54 / 53 / 52
HEAD LOSS (COOLING)			kPa / psi	46 / 6.6	56 / 8.1	49 / 7.2	24.0 / 3.5	38 / 5.5
HEAD LOSS (HEATING) : 50°C			kPa / psi	39 / 5.7	48 / 7	43 / 6.2	22 / 3.1	32 / 4.6
CONNECTION				3/4" BSP FEMALE ADAPTOR				

NOTE :
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), LEAVING WATER TEMP. : 55°C (131°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD.
POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

Chilled Water Fan Coil Unit Specifications

ACC10CW - ACC28CW (Ceiling Concealed)

MODEL				ACC10CW	ACC15CW	ACC20CW	ACC25CW	ACC28CW
50HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	9900	11600	18000	22500	26000
			W	2900	3400	5280	6590	7620
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	7000	10600	12600	15800	18200
			W	2050	3100	3690	4620	5330
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	11500	15000	23000	29000	33000
			W	3370	4400	6740	8500	9670
	NOMINAL AIR FLOW	HIGH	l/s / CFM	142 / 300	241 / 510	330 / 700	344 / 730	382 / 810
		MEDIUM	l/s / CFM	123 / 260	208 / 440	321 / 680	340 / 720	363 / 770
		LOW	l/s / CFM	104 / 220	170 / 360	293 / 620	274 / 580	335 / 710
	NOMINAL WATER FLOW RATE		USGPM	2.20	2.55	4.00	4.98	5.77
			LITRES/M	8.33	9.65	15.14	18.85	21.84
	POWER SOURCE		V/Ph/Hz	220-240/1/50				
	TOTAL INPUT POWER		W	67.60	97.20	141.00	165.00	273.00
60HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	9900	11600	18000	22500	-NA-
			W	2900	3400	5280	6590	
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	11500	15000	23000	29000	
			W	3370	4400	6740	8500	
	NOMINAL AIR FLOW	HIGH	l/s / CFM	142 / 300	330 / 700	344 / 730	382 / 810	
	NOMINAL WATER FLOW RATE		USGPM	2.20	2.55	4.00	4.98	
			LITRES/M	8.33	9.65	15.14	18.85	
	POWER SOURCE		V/Ph/Hz	208-230/1/60				
	TOTAL INPUT POWER		W	78.00	114.00	165.00	219.00	
EXTERNAL STATIC (H/M/L)			mmAq	5 / 4 / 3	5 / 4 / 2	7 / 6 / 3	6 / 4 / 3	8 / 7 / 6
UNIT DIMENSION - ( ) WITH PANEL		HEIGHT	mm/in	261 / 10.3	261 / 10.3	261 / 10.3	261 / 10.3	290 / 11.4
		WIDTH	mm/in	765 / 30.1	905 / 35.6	1065 / 41.9	1200 / 47.2	942 / 37.1
		DEPTH	mm/in	411 / 16.2	411 / 16.2	411 / 16.2	411 / 16.2	600 / 23.6
UNIT WEIGHT (UNIT + PANEL)			kg/lb	17 / 37.5	21 / 46.3	22 / 48.5	25 / 55.1	38 / 83.8
SOUND PRESSURE LEVEL (H/M/L)			dBA	33 / 30 / 26	37 / 34 / 29	38 / 36 / 34	40 / 39 / 36	41 / 38 / 34
HEAD LOSS (COOLING)			kPa / psi	11 / 1.5	24 / 3.5	20 / 2.9	32 / 4.7	24 / 3.5
HEAD LOSS (HEATING) : 50°C			kPa / psi	9 / 1.3	20 / 2.9	17 / 2.5	28 / 4	22 / 3.2
CONNECTION				3/4" BSP FEMALE ADAPTOR				

ACC30CW - ACC60CW (Ceiling Concealed)

MODEL				ACC30CW	ACC38CW	ACC40CW	ACC50CW	ACC60CW
50HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	28000	35200	38000	47000	54000
			W	8210	10320	11140	13770	15830
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	19900	24600	26600	32900	37800
			W	5830	7220	7800	9640	11080
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	36000	43000	46000	57000	67000
			W	10550	12600	13480	16710	19640
	NOMINAL AIR FLOW	HIGH	l/s / CFM	392 / 830	694 / 1470	500 / 1060	651 / 1380	722 / 1530
		MEDIUM	l/s / CFM	359 / 760	670 / 1420	467 / 990	604 / 1280	675 / 1430
		LOW	l/s / CFM	335 / 710	637 / 1350	425 / 900	571 / 1210	609 / 1290
	NOMINAL WATER FLOW RATE		USGPM	6.21	7.84	8.45	10.40	11.98
			LITRES/M	23.51	29.68	31.99	39.37	45.35
	POWER SOURCE		V/Ph/Hz	220-240/1/50				
	TOTAL INPUT POWER		W	421	486	448	510	562
60HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	28000	-NA-	38000	47000	54000
			W	8210		11140	13770	15830
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	36000		46000	57000	67000
			W	10550		13480	16710	19640
	NOMINAL AIR FLOW	HIGH	l/s / CFM	392 / 830		500 / 1060	651 / 1380	722 / 1530
	NOMINAL WATER FLOW RATE		USGPM	6.21		8.45	10.40	11.98
			LITRES/M	23.51		31.99	39.37	45.35
	POWER SOURCE		V/Ph/Hz	208-230/1/60		208-230/1/60		
	TOTAL INPUT POWER		W	486		661	767	804
EXTERNAL STATIC (H/M/L)			mmAq	17 / 13 / 9	12 / 11 / 9	18 / 13 / 10	16 / 14 / 11	16 / 14 / 10
UNIT DIMENSION - ( ) WITH PANEL		HEIGHT	mm/in	378 / 14.9	290 / 11.4	378 / 14.9	378 / 14.9	379 / 14.9
		WIDTH	mm/in	929 / 36.6	942 / 37.1	1045 / 41.1	1299 / 51.1	1499 / 59.0
		DEPTH	mm/in	541 / 21.3	600 / 23.6	541 / 21.3	541 / 21.3	541 / 21.3
UNIT WEIGHT (UNIT + PANEL)			kg/lb	39 / 86.0	41 / 90.4	42 / 92.6	54 / 119.0	62 / 136.7
SOUND PRESSURE LEVEL (H/M/L)			dBA	46 / 42 / 38	51 / 48 / 45	49 / 45 / 41	52 / 50 / 47	53 / 50 / 47
HEAD LOSS (COOLING)			kPa / psi	15 / 2.1	49 / 7.1	21 / 3	41 / 5.9	8 / 1.1
HEAD LOSS (HEATING) : 50°C			kPa / psi	12 / 1.8	44 / 6.3	18 / 2.6	36 / 5.2	7 / 1
CONNECTION				3/4" BSP FEMALE ADAPTOR				

Notes:
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), LEAVING WATER TEMP. : 55°C (131°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD.
POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

Chilled Water Fan Coil Unit Specifications

ACW200C - ACW1200C (Ceilling Concealed)

MODEL			ACW200C	ACW300C	ACW400C	ACW600C	ACW800C	ACW1000C	ACW1200C
NOMINAL TOTAL COOLING CAPACITY		Btu/h	7507	10919	14979	21019	26649	30129	36510
		W	2200	3200	4390	6160	7810	8830	10700
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	5930	8049	11062	15017	20609	21868	26488
		W	1738	2359	3242	4401	6040	6409	7763
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 60°C)		Btu/h	11942	17402	24909	33985	44631	50431	65411
		W	3500	5100	7300	9960	13081	14780	19171
NOMINAL AIR FLOW	HIGH	l/s / CFM	109 / 230	148 / 312	212 / 447	290 / 612	395 / 835	451 / 953	568 / 1200
	MEDIUM	l/s / CFM	73 / 153	103 / 218	137 / 289	217 / 459	304 / 641	317 / 671	417 / 882
	LOW	l/s / CFM	53 / 112	67 / 142	95 / 200	139 / 294	206 / 436	231 / 489	284 / 600
For Conversion purpose	HIGH	l/s	109	148	212	290	395	451	568
	MEDIUM	l/s	73	103	137	217	304	317	417
	LOW	l/s	53	67	95	139	206	231	284
	HIGH	CFM	230	312	447	612	835	953	1200
	MEDIUM	CFM	153	218	289	459	641	671	882
	LOW	CFM	112	142	200	294	436	489	600
	HIGH	m3h	390	530	760	1040	1420	1620	2040
	MEDIUM	m3h	260	370	490	780	1090	1140	1500
	LOW	m3h	190	240	340	500	740	830	1020
EXTERNAL STATIC (H/M/L)		mmAq	8.16 / 6.12 / 3.06						
UNIT DIMENSION	HEIGHT	mm/in	251 / 9.88	251 / 9.88	251 / 9.88	251 / 9.88	251 / 9.88	251 / 9.88	251 / 9.88
	WIDTH	mm/in	714 / 28.11	884 / 34.8	1014 / 39.92	1214 / 47.8	1464 / 57.64	1564 / 61.57	1824 / 71.81
	DEPTH	mm/in	490 / 19.29	490 / 19.29	490 / 19.29	490 / 19.29	490 / 19.29	490 / 19.29	490 / 19.29
UNIT WEIGHT		kg/lb	19 / 41.9	20 / 44.1	26 / 57.3	30 / 66.1	41 / 90.4	44 / 97.0	46 / 101.4
SOUND PRESSURE LEVEL (H/M/L) AT 60Pa		dBA	37 / 34 / 31	38 / 35 / 31	41 / 36 / 33	47 / 44 / 38	47 / 44 / 39	49 / 46 / 40	49 / 45 / 42
NOMINAL WATER FLOW RATE		USGPM	1.80	2.50	3.40	4.80	6.10	6.90	8.50
		LITRES/M	6.80	9.45	12.85	18.14	23.06	26.08	32.13
HEAD LOSS (COOLING)		kPa / psi	14.6 / 2.12	12 / 1.74	21.6 / 3.13	38.2 / 5.54	18.4 / 2.67	21 / 3.05	32.7 / 4.74
HEAD LOSS (HEATING) : 60°C		kPa / psi	14.6 / 2.12	12 / 1.74	21.6 / 3.13	38.2 / 5.54	18.4 / 2.67	21 / 3.05	32.7 / 4.74
CONNECTION			3/4" BSP FEMALE ADAPTOR						

ACW200H - ACW1200H (Ceilling Concealed)

MODEL			ACW200H	ACW300H	ACW400H	ACW600H	ACW800H	ACW1000H	ACW1200H
NOMINAL TOTAL COOLING CAPACITY		Btu/h	7268	10578	14536	20405	25864	29242	35418
		W	2130	3100	4260	5980	7580	8570	10380
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	5742	7798	10735	14578	20002	21224	25696
		W	1683	2285	3146	4273	5862	6220	7531
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 60°C) - 1 ROW		Btu/h	4606	7780	10953	14638	17470	23680	28969
		W	1350	2280	3210	4290	5120	6940	8490
NOMINAL AIR FLOW	HIGH	l/s / CFM	101 / 212	142 / 300	209 / 441	281 / 594	384 / 812	437 / 924	556 / 1176
	MEDIUM	l/s / CFM	70 / 147	98 / 206	131 / 277	215 / 453	298 / 630	309 / 653	409 / 865
	LOW	l/s / CFM	51 / 106	64 / 136	92 / 195	137 / 289	201 / 424	228 / 483	281 / 594
EXTERNAL STATIC (H/M/L)		mmAq	8.16 / 6.12 / 3.06						
UNIT DIMENSION	HEIGHT	mm/in	251 / 9.9	251 / 9.9	251 / 9.9	251 / 9.9	251 / 9.9	251 / 9.9	251 / 9.9
	WIDTH	mm/in	714 / 28.1	884 / 34.8	1014 / 39.9	1214 / 47.8	1464 / 57.6	1564 / 61.6	1824 / 71.8
	DEPTH	mm/in	490 / 19.3	490 / 19.3	490 / 19.3	490 / 19.3	490 / 19.3	490 / 19.3	490 / 19.3
UNIT WEIGHT		kg/lb	20 / 44.1	24 / 52.9	28 / 61.7	32 / 70.5	44 / 97	47 / 103.6	49 / 108
SOUND PRESSURE LEVEL (H/M/L) AT 60Pa		dBA	37 / 34 / 31	38 / 35 / 31	41 / 36 / 33	47 / 44 / 38	47 / 44 / 39	49 / 46 / 40	49 / 45 / 42
NOMINAL WATER FLOW RATE - 3 ROWS		USGPM	1.80	2.50	3.40	4.80	6.10	6.90	8.50
		LITRES/M	6.80	9.45	12.85	18.14	23.06	26.08	32.13
NOMINAL WATER FLOW RATE - 1 ROW		USGPM	1.10	1.10	1.10	1.10	1.10	2.20	2.20
		LITRES/M	4.16	4.16	4.16	4.16	4.16	8.32	8.32
HEAD LOSS (COOLING) - 3 ROWS		kPa / psi	14.6 / 2.12	12 / 1.74	21.6 / 3.13	38.2 / 5.54	18.4 / 2.67	21 / 3.05	32.7 / 4.74
HEAD LOSS (HEATING) : 60°C - 3 ROWs		kPa / psi	14.6 / 2.12	12 / 1.74	21.6 / 3.13	38.2 / 5.54	18.4 / 2.67	21 / 3.05	32.7 / 4.74
HEAD LOSS (COOLING) - 1 ROW		kPa / psi	12 / 1.74	13.5 / 1.96	14.8 / 2.15	20.7 / 3	4 / 0.58	12.8 / 1.86	14.6 / 2.12
HEAD LOSS (HEATING) : 60°C - 1 ROW		kPa / psi	12 / 1.74	13.5 / 1.96	14.8 / 2.15	20.7 / 3	4 / 0.58	12.8 / 1.86	14.6 / 2.12
CONNECTION			3/4" BSP FEMALE ADAPTOR						

Notes:

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19.5°C (67.1°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)

b) HEATING - ENTERING AIR TEMP.: 21°C (69.8°F) DB, ENTERING WATER TEMP. : 60°C (140°F), LEAVING WATER TEMP. : 55°C (131°F)

4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA.

Chilled Water Fan Coil Unit Specifications

AWM07GW - AWM25GW (Wall Mount)

MODEL				AWM07GW	AWM10GW	AWM15GW	AWM20GW	AWM25GW	MWM301W
50HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	8000	9500	11000	15500	18000	22000
			W	2340	2780	3220	4540	5280	6450
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	5900	6900	8000	12500	14800	16720
			W	1730	2030	2350	3650	4330	4900
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	10300	12800	14000	20500	23000	23000
			W	3020	3750	4100	6010	6740	6740
	NOMINAL AIR FLOW	HIGH	l/s / CFM	130 / 275	142 / 300	163 / 345	297 / 630	312 / 660	316 / 670
		MEDIUM	l/s / CFM	106 / 225	118 / 250	134 / 285	231 / 490	274 / 580	297 / 630
		LOW	l/s / CFM	83 / 175	94 / 200	104 / 220	208 / 440	222 / 470	236 / 500
	NOMINAL WATER FLOW RATE		USGPM	1.76	2.11	2.42	3.43	4.00	4.90
			LITRES/M	6.66	7.99	9.16	12.98	15.14	18.50
	POWER SOURCE		V/Ph/Hz	220-240/1/50					
	TOTAL INPUT POWER		W	24.00	25.00	29.00	66.00	69.00	71.00
60HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	-NA-	9500	11000	15500	18000	-NA-
			W		2780	3220	4540	5280	
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h		12800	14000	20500	23000	
			W		3750	4100	6010	6740	
	NOMINAL AIR FLOW	HIGH	l/s / CFM		142 / 300	163 / 345	297 / 630	312 / 660	
	NOMINAL WATER FLOW RATE		USGPM		2.11	2.42	3.43	4.00	
			LITRES/M		7.99	9.16	12.98	15.14	
	POWER SOURCE		V/Ph/Hz		208-230/1/60				
	TOTAL INPUT POWER		W		28.60	28.60	63.00	65.80	
UNIT DIMENSION - ( ) WITH PANEL		HEIGHT	mm/in	260 / 10.2	260 / 10.2		304 / 12.0		291 / 11.4
		WIDTH	mm/in	799 / 31.5	899 / 35.4		1062 / 41.8		815 / 32.1
		DEPTH	mm/in	198 / 7.8	198 / 7.8		222 / 8.7		181 / 7.1
UNIT WEIGHT (UNIT + PANEL)			kg/lb	10 / 22.1	12 / 26.5		16 / 35.3	16 / 35.3	20 / 44.2
SOUND PRESSURE LEVEL (H/M/L)			dBA	38 / 33 / 28	39 / 34 / 28	42 / 36 / 29	49 / 44 / 42	50 / 48 / 45	49 / 47 / 45
HEAD LOSS (COOLING)			kPa / psi	48 / 7	65 / 9.4	77 / 11.1	50 / 7.3	69 / 10	52 / 7.6
HEAD LOSS (HEATING) : 50°C			kPa / psi	42 / 6.1	59 / 8.5	64 / 9.2	51 / 7.3	71 / 10.2	19 / 2.7
CONNECTION				1/2" BSP FEMALE ADAPTOR					

Notes:
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), LEAVING WATER TEMP. : 55°C (131°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD.
POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

ADB75BW - ADB150BW (Ducted Blower)

MODEL			ADB75BW	ADB100BW	ADB125BW	ADB150BW
50HZ	NOMINAL TOTAL COOLING CAPACITY	Btu/h	75600	95000	12500	150000
		W	22160	27840	36640	43960
	NOMINAL SENSIBLE COOLING CAPACITY	Btu/h	56400	69400	90000	106500
		W	16520	20330	26380	31210
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)	Btu/h	78000	97500	138000	170000
		W	22860	28580	40450	49820
	NOMINAL AIR FLOW	l/s / CFM	1180 / 2500	1510 / 3200	1982 / 4200	2171 / 4600
	NOMINAL WATER FLOW RATE	USGPM	16.78	21.09	27.74	33.29
		LITRES/M	63.52	79.83	105.01	126.02
	POWER SOURCE	V/Ph/Hz	220-240/1/50			
	TOTAL INPUT POWER	W	810.00	1840.00	1550.00	1620.00
60HZ	NOMINAL TOTAL COOLING CAPACITY	Btu/h	75600	95000	122500	150000
		W	22160	27840	36640	43960
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)	Btu/h	78000	97500	138000	170000
		W	22860	28580	40450	49820
	NOMINAL AIR FLOW	l/s / CFM	1180 / 2500	1510 / 3200	1982 / 4200	2171 / 4600
	NOMINAL WATER FLOW RATE	USGPM	16.78	21.09	27.74	33.29
		LITRES/M	63.52	79.83	105.01	126.02
	POWER SOURCE	V/Ph/Hz	208-230/1/60			
	TOTAL INPUT POWER	W	1098.00	1396.00	1063.00	1575.00
EXTERNAL STATIC (H/M/L)		mmAq	10.2		15.2	10.2
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	572 / 22.5	572 / 22.5	885 / 34.8	885 / 34.8
	WIDTH	mm/in	1502 / 59.1	1502 / 59.1	1640 / 64.6	1640 / 64.6
	DEPTH	mm/in	761 / 30.0	761 / 30.0	1040 / 40.9	1040 / 40.9
UNIT WEIGHT (UNIT + PANEL)		kg/lb	96 / 211.6	100 / 220.5	140 / 308.6	145 / 319.7
SOUND PRESSURE LEVEL (H/M/L)		dBA	56	57	58	59
HEAD LOSS (COOLING)		kPa / psi	35 / 5	42 / 6.1	22.75 / 3.30	18.96 / 2.75
HEAD LOSS (HEATING) : 50°C		kPa / psi	33 / 4.8	27 / 4	17.93 / 2.60	14.89 / 2.16
CONNECTION			1 1/8" BRAZING			

Notes:
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), LEAVING WATER TEMP. : 55°C (131°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD.
POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE UNIT (FREE RETURN AND DISCHARGE AIR WAS DUCTED TO ADJACENT ROOM)

Chilled Water Fan Coil Unit Specifications

ACM15EW - ACM25EW (Ceiling Convertible)

MODEL				ACM15EW	ACM20EW	ACM25EW
50HZ	NOMINAL TOTAL COOLING CAPACITY		Btu/h	15500	20300	21000
			W	4540	5950	6150
	NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	12700	15400	16200
			W	3720	4510	4750
	NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	19500	25000	28000
			W	5720	7330	8210
	NOMINAL AIR FLOW	HIGH	l/s / CFM	236 / 500	274 / 580	293 / 620
		MEDIUM	l/s / CFM	213 / 450	250 / 530	269 / 570
		LOW	l/s / CFM	189 / 400	231 / 490	245 / 520
	NOMINAL WATER FLOW RATE		USGPM	3.43	4.49	4.67
			LITRES/M	12.98	17.00	17.68
	POWER SOURCE		V/Ph/Hz	220-240/1/50		
	TOTAL INPUT POWER		W	101.00	109.00	113.00
UNIT DIMENSION - ( ) WITH PANEL		HEIGHT	mm/in	212 / 8.3		
		WIDTH	mm/in	1090 / 42.9		
		DEPTH	mm/in	630 / 24.8		
UNIT WEIGHT (UNIT + PANEL)			kg/lb	27 / 59.5		
SOUND PRESSURE LEVEL (H/M/L)			dBA	50 / 43 / 41	53 / 51 / 49	56 / 51 / 44
HEAD LOSS (COOLING)			kPa / psi	27 / 4.0	48 / 7.0	57 / 8.3
HEAD LOSS (HEATING) : 50°C			kPa / psi	24 / 3.5	42 / 6.1	50 / 7.3
CONNECTION				1/2" BSP FEMALE ADAPTOR		

Notes:
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), LEAVING WATER TEMP. : 55°C (131°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD.
POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

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